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ABSTRACT

This document presents a review of the activities of the Council of Ontario Universities during academic year 1970-71. Topics discussed in the booklets include information systems, funding formula for the universities, university relations with government, university expansion, graduate education development, engineering education development, interinstitutional cooperation efforts, and financial support for the universities. (HS)

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Council of Ontario Universities

Fifth Annual Review, 1970-71

Conseil des Universités de l'Ontario

Participatory Planning

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PREFACE

The *Fifth Annual Review* is longer than its predecessors for two reasons. The first is that the range of the Council's activities has continued to expand as the opportunities for planning and cooperative activities have increased. The second is that this *Annual Review* has as its theme the fact that, through the machinery of the Council, the universities of Ontario have created instruments for planning and cooperation and that these instruments are proving themselves effective through a record of solid accomplishment. The *Review* provides not only descriptions of the organization but also documents the evidence that the machinery is working.

Much of the evidence is documented more completely in the various publications of the Council and its affiliates but is summarized here to provide a wider audience with an overview of the work of the Council.

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1.

PARTICIPATORY PLANNING

Traditional methods of reaching decisions on matters affecting the public interest seem no longer adequate as the pace of change quickens. Perhaps they never were adequate; but as new technologies change our lives in often unpredictable ways, as society becomes more and more dependent on government for services, and as the demands on the public purse soar, more and more citizens and groups are pre-occupied as much with *how* decisions are made as with *what* the decisions are.

This concern for the process of making decisions is evident in many of society's institutions. Its manifestations can be seen at the governmental level in the development of white papers and task force reports. The theme of the *Eighth Annual Review* of the Economic Council of Canada[1] is new approaches to decision-making. Corporations are reassessing their methods as they come under fire from stockholders and a new generation of young officers who hold different values than the old-fashioned virtues of hard work, efficiency, and competition. Health professionals, governments and concerned laymen are seeking new ways of deciding on policy and setting priorities for health care. Churches rocked by the conflict between ancient doctrine and modern crises are searching for new organizational accommodations.

The field of education has been no exception. Commissions and self-examination have become the order of the day and these generally have given serious attention to the question of how decisions are made and how they should be made. In addition to concerns about the decision-making process *per se*, a series of old questions about university education are being asked with new urgency. What are the economic benefits of university education? What are the non-economic benefits? To what extent are these benefits divided between the individual and society? Who should pay? How much should it cost? Who should attend university? What are the obstacles to accessibility? What are the relations between universities and the labour market? How should resources

[1]Economic Council of Canada, *Eighth Annual Review: Design for Decision-Making* (Ottawa: Queen's Printer, 1971).

be allocated to allow for an orderly and effective yet economic development of university programmes? It is evident that these are complex questions of great concern in relation to public policy and it is equally clear that finding answers is not the prerogative of any one group.

The Council of Ontario Universities increasingly has been engaged in consideration of such issues, partly because of a responsibility to do so in recognition of the public interest, and partly because of its commitment to a strong and healthy constellation of universities in Ontario. The result has been a transformation of the universities in less than ten years from a condition of almost complete independence to one which is now substantially interdependent.

The first meeting of the Committee of Presidents (predecessor to the Council of Ontario Universities) was in March, 1962, under the chairmanship of Dr. Claude Bissell. It was called because the presidents of that day were aware, at the outset of a period of unprecedented but accurately predicted growth, that they had a mutuality of interests. Nevertheless, the beginnings were hesitant and cautious if not frankly suspicious. Cooperation was a new concept among universities and seemed somehow to contradict long-established traditions of autonomy. The proceedings of a meeting the following July were recorded concisely in one and a half pages of minutes. Irregularly scheduled meetings followed over the next several years and these were usually called to deal with specific problems arising from time to time, the solution of which required a forum for discussion.

During those early days, less than a decade ago, the confrontation between "autonomy," the traditional watchword of universities, and the new framework of a massive programme of university education heavily dependent on the public purse was recognized. Dr. Bissell, in 1963, had this to say about autonomy:

> . . . there are three basic freedoms: the freedom to determine who shall be taught, the freedom to determine what shall be taught, and the freedom to determine who shall teach. I shall add a fourth, although it is implied in the first three: the freedom to distribute its financial resources as it sees fit. I am not suggesting that these are absolute freedoms, in the sense that the universities should refuse to discuss any of these matters with outside bodies. I am simply saying that the university must never abdicate its right to make the final decisions in any of these areas.[2]

In the past year, by contrast with the halting beginnings in 1962, the Council of Ontario Universities had 28 full members (14 executive heads and 14 colleagues elected by the senior academic bodies in the respective universities). It met regularly on a monthly basis, with its heavy agenda piloted by an Executive

[2]Bissell, C., "The Independence of Universities." *Varsity Graduate* (Summer 1963) p. 16.

Committee which met prior to each meeting of the Council. The preparation of working papers and recommendations for the Council involved a large number of committees and affiliated bodies, with the participation of well over 200 representatives of the academic community in Ontario. The Council is now served by a staff of 35 working in five divisions—the Secretariat and Research Division, an Office of Library Coordination, an Office of Computer Coordination, an Advisory Committee on Academic Planning, and a newly established Ontario Universities' Application Centre. During the past year the Council and its affiliates completed some 32 publications—over 2,000 pages of analyses, planning documents and policy statements. The total budget, met partly by the universities and partly by grants from the government, has grown to about $1 million or about 0.2% of total provincial university income.

There are several reasons for the increased activity of the Council. The amount of money required to support the 14 provincially supported universities is clearly a matter of public concern. That concern sometimes takes the form of hostility and is manifested in angry questions which fail to recognize the true nature of the academic enterprise. Why are professors paid for full time when they teach only nine hours a week and seven months a year? Why don't universities have job descriptions for professors? Such questions do not acknowledge the great importance of research and various public services provided by professors nor do they recognize the way in which the professor's tasks and duties are constantly changing.

These are not the only questions asked however. Serious and important questions are being asked by many people. They relate to purposes, value, economy, methods and patterns, and they deserve and are receiving the thoughtful attention of the university community, to a great extent through the work of the Council of Ontario Universities.

Other reasons for the increased need for the Council's work relate to the financing of the universities. The rapid increases in unit expenditure of the sixties have ceased and universities have had to shift their emphasis from the problems of growth to include new concerns for economies without loss of quality. Among the ways of achieving this objective, cooperation among institutions ranks high. In each of the Council's major activities such opportunities are being identified and pursued. In addition it is significant that the universities are dependent almost entirely on a single source, the provincial government, for their financial support (excluding direct research support which comes largely from the federal government) and this support is provided through a system of financing by formula. Thus universities are not in competition with each other for government funds, and at the same time it is self-evident that there is value in working together to identify needs and to make the case for adequate support of universities.

Participatory Planning

Beyond all of these reasons for the development of the Council of Ontario Universities, there is a very real threat of government intervention if the universities are not seen to move quickly enough in the direction of effective planning and the exercise of appropriate restraint. Some examples from the past year illustrate the problem.

The Committee on University Affairs as adviser to government was concerned about the numbers of graduate students, especially foreign students, being financially supported by universities in Ontario. Among the regulations which the Committee at different times proposed to recommend to the Minister were regulations calling for a quota on foreign students, an increase in graduate student fees to $750 ($250 per semester), and a limit on remuneration of *all* graduate students from formula income to a maximum of $1,800. In each case COU succeeded in having these proposed regulations discussed by a new joint CUA/COU committee on graduate studies and was able to demonstrate that the regulations would have unwished-for effects and would in addition be unfair to students already enrolled. As a result, each of the proposed regulations was either withdrawn or modified in such a way as to make it more acceptable. No quota was applied. Graduate formula fees were set at the level of undergraduate fees ($485). The $1,800 limitation was applied only to newly enrolled students.

On another occasion during the year the Department of University Affairs placed an embargo against any new graduate programmes in any field unless the programme was unique to Ontario. As a result of development by COU and the Ontario Council on Graduate Studies of plans for a series of planning assessments of graduate development and the identification of priorities for such assessments, the embargo was lifted except for a dozen disciplines on the priority list.

During the summer of 1971 a letter from the Department of University Affairs specified that hereafter, all new programmes, both at the undergraduate and graduate levels, must receive approval in writing from the Department before the university involved will be entitled to count the students enrolled in such programmes for grant purposes. New programmes have been defined by the Department to include even the establishment of a new undergraduate department. This regulation differs significantly from arrangements previously in effect which, as stated in the 1967 Report of the Committee on University Affairs, were intended to give "freedom to the individual institution to order priorities and take necessary decisions." At the time of writing COU is awaiting an appointment with the Minister to protest the new regulation and argue that it is neither necessary nor consistent with the principles on which formula financing was founded. Good planning is taking place and the government hopefully can feel sufficiently confident that it need not impose, in CUA's words, "the dead hand of uniformity."

Other examples could be cited from the past year to show that government is prepared to move unilaterally if the universities do not act by collectively providing good planning and recommending sound policy. It is little wonder that the pace of planning has quickened.

The evolution of the last decade has created an interdependent system of universities which is proving itself through performance to be able to plan, to develop policies, and to implement them. The activities on which these accomplishments are based are described in the following chapters of this review. Their principal features are described briefly here.

An essential basis for the work of COU, its committees, and affiliates is good research. COU has engaged a small staff of researchers who work with the various subgroups to carry out the investigations necessary to provide a backdrop for policy discussions. These studies are never launched without proposals being drafted and submitted by the appropriate subgroup to the Council for approval. Thus the Council decides what is to be studied and how it is to be studied. In addition a monthly status report on all projects is submitted to Council in order that it can be satisfied that priorities are being recognized and that progress is adequate. The various studies relate to such matters as operating finances, need for formula revisions, the development of a capital formula, space utilization, enrolment projections, citizenship of students and faculty, library requirements, financial reporting, alternative academic calendars, class sizes. In many cases the studies are initiated directly as a result of enquiries made by CUA or the government. In other cases members of COU or affiliates have identified needs and initiated proposals. All research reports, once accepted by COU, become public documents provided the data are aggregated and do not identify individual institutions. Where data relate to individual universities the reports are released only if COU decides that it is in the public interest to do so. Any university is entitled to ask that data relating to it be not released but this privilege has never been exercised.

COU's first exercise in academic planning was a study of engineering education. It was conducted under the joint auspices of COU and the Committee of Ontario Deans of Engineering. The study was directed by Dr. Philip Lapp and two colleagues, Dr. Colin Mackay and Dr. J. W. Hodgins. It took fifteen months to complete, included visits to every Ontario university interested in engineering and to 132 organizations in six countries, and cost $117,000. The resultant report, *Ring of Iron*,[3] provided a thoughtful blueprint for engineering education in the 1970s. It argued for considerable specialization of effort at both the undergraduate and graduate levels and in research. It identified some overexpansion of graduate development and called for a 17% reduction in total

[3]*Ring of Iron: A Study of Engineering Education in Ontario* (Toronto: Committee of Presidents of Universities of Ontario, 1970).

graduate enrolment and a reduction over two years in doctorate enrolment from about 700 to 450. The report was studied in the universities and in the faculties of engineering; critiques were prepared and submitted to COU by the Committee of Ontario Deans of Engineering, the Ontario Council on Graduate Studies, and the Association of Professional Engineers of the Province of Ontario. Having the benefit of these commentaries, after thorough consideration COU adopted a set of recommendations consistent with the Lapp proposals, including immediate implementation of reductions in graduate enrolments to the totals proposed in the Lapp report. COU recommendations were addressed to the individual universities and to CUA, and now constitute a policy statement concerning engineering education.

Many things were learned from the exercise but the most important was that the universities can work together toward the development of rational plans, and having developed them can voluntarily agree to implement them.

The experience with planning engineering education offers strong encouragement that newly developed procedures for planning all graduate education can and will be successful. The Ontario Council on Graduate Studies and COU jointly have established an Advisory Committee on Academic Planning. Its function is to facilitate planning assessments in an orderly way, identifying likely priorities, and proposing in each discipline or group of disciplines how the assessment will be carried out. Assessments will involve the representatives of the disciplines in the process and will engage outside consultants to participate in the examination. The Advisory Committee on Academic Planning is being served by a full-time Executive Vice-Chairman, Dr. M. A. Preston, and the operation has been provided with a budget for the first year amounting to $175,000, half of which comes from a special government grant recommended by the Committee on University Affairs. Priorities for the first seven assessments have been established by COU and the operation is well underway.

The evidence of the past year is compelling that the universities can plan and can reach hard conclusions, and that they mean business in proceeding with a systematic and careful assessment of graduate needs for Ontario.

In addition to research, planning, and the resultant development of policies, examples of which have been offered in this chapter, COU carries out a number of cooperative activities to serve the university community. These include, at the moment, an Office of Library Coordination, an Office of Computer Coordination, and the Ontario Universities' Application Centre. Another such activity, a Centre for Instructional Development, has been approved in principle and may be established during the coming year.

In each instance the organizational arrangements are similar. The function is carried out by a full-time director and staff appropriate to the purposes. The Director reports to a Board appointed by COU, the members being chosen to

provide the range of skills, interests, and liaisons essential to develop sound policy recommendations. The Board and Director are expected to generate policy recommendations and budget proposals for consideration by COU. They are expected within the framework of established policy to be responsible for carrying out the necessary programmes. These arrangements arose out of recommendations of a Special Subcommitee on the Structure of the Ontario University System chaired by President Symons. They appear to be providing a satisfactory model, both for the development of policy and carrying out approved programmes.

The overall characteristics of COU and its various parts can best be described as an exercise in participatory planning. A research capacity provides data and analyses as a prerequisite for informed discussion. The organization itself provides multiple forums for discussion—standing committees, affiliates, and several joint committees with CUA, the Ontario Confederation of University Faculty Associations, the Department of Education, or the Committee of Presidents of the Colleges of Applied Arts and Technology. Colleague members report to senates, allowing for further discussions by these bodies. COU has exposed its discussions to the public arena through a *Monthly Review*, its set of publications, and a series of press conferences.

Finally, the emphasis has been on long-term planning and the aim has been to develop plans that serve the public interest. At the same time, in order to provide for participation, COU has deliberately discounted the kind of traditional "efficiency" which means getting things done quickly and with a minimum of talk. The problems of post-industrial society are larger, more complex, more dependent on the conflicting objectives of different interest groups, more demanding of an understanding of costs and benefits, notions of trade-off, and changing values among the members of society. The fact that interrelationships are beginning to be better appreciated results from better theoretical knowledge and new capacity to analyze information and predict consequences. As society moves to give more attention to long-term planning and wide-scale participation, enthusiasm for *ad hoc* solutions needs to be dampened. Reflex responses to specific problems have the annoying habit of providing unexpected and often dismaying results.

Planning, in contrast, is not an act but a process which is characterized by continuous adjustment. The higher the rate of change, the greater the need for planning. It is to be understood, however, that the higher the rate of change, the greater also the certainty that initial planning assumptions will require change. In other words, faster change means more difficult planning but makes a flexible planning and capacity to adjust plans to meet new realities all the more important. It requires acknowledging complexities, and involving interest groups with apparently conflicting goals. It involves too a process of learning. Participants

cannot help but become sensitive to complexity and in doing so, become more judicious in their attitudes.

These are principles on which the Council of Ontario Universities is building. It does so with the conviction that its decisions will thereby be wiser and its views will more properly reflect the true needs of society from our universities.

2.

A SYSTEM FOR THE SEVENTIES

The theme of this annual review is the recent emergence of a system for cooperation amongst universities, and between universities and government, which the Council of Ontario Universities believes will provide a viable and sensitive structure to assist the universities in meeting the challenges of the seventies. In this chapter we provide details on some of the significant developments which took place over the past year concerning the structure of the system.

THE ORGANIZATION ITSELF

The most visible change to the collective organization took place on May 1, 1971, when the Committee of Presidents of Universities of Ontario became the Council of Ontario Universities[1] by constitutional amendment.[2] The change in name did not, however, reflect a change in substance of the organization. It was rather a reflection of the fact that the organization had not for some time been a "committee of presidents." Beginning in 1967, presidents had been accompanied to meetings by non-voting colleagues. In March, 1970, a formal change in the composition of the organization had been made, entitling each institution to two full members—the president and a colleague selected by the senior academic governing body of the university.[3] Further, for a number of years the deliberations of the senior body have been supported by the activities of hundreds of professors and academic and non-academic administrators who have advised on the vast array of policy issues which confront the university system.

The recommendation for a change in name had been made in a report by the

[1]Although the change in name took place part way through the year under review, we shall hereinafter use the new name irrespective of what the name actually was at the time of the event being reported.

[2]A copy of the current constitution is given in Appendix B.

[3]Current membership of the Council and its Executive Committee, along with observers and Secretariat Staff are listed in Appendix A.

Special Subcommittee on the Structure of the Ontario University System. This special subcommittee, set up in early 1970 under the chairmanship of President T. H. B. Symons, made recommendations on a variety of issues respecting the effectiveness of the university system. The special subcommittee considered the respective roles of member institutions, the collective organization, the Committee on University Affairs, and the provincial government. The series of recommendations arrived at by the subcommittee, and subsequently approved with minor modifications by the Council, proposed further evolution of the existing system rather than any major restructuring of the system.

In its discussion of the effective functioning of the collective organization, the subcommittee held that the provincial university community must improve its capacity to reach decisions in the common interest, and to do so expeditiously. The subcommittee also noted that this improvement must not be at the expense of a loss of essential freedoms of the individual institutions which comprise the system. The subcommittee was conscious of the steadily increasing workload which the organization has been facing. (As an illustration, we note that members are frequently faced with a folder of documentation over an inch thick for a monthly meeting!) One recommendation to improve the effective handling of business was to have the Executive Committee assume an increasing role in the handling of routine business, and in the review of issues by preparing recommendations for consideration by the whole Council. A related recommendation was that greater reliance for assistance should be placed on the wide range of inter-university groups of academic and non-academic officers. Other recommendations dealt with voting (not favoured in general as a means of decision-making), the role of the Chairman, and the setting of priorities in order to guard against the many natural pressures for unselective and unplanned expansion of the organization's activities and costs.

The special subcommittee also considered the management of major co-operative programmes, such as library and computer coordination. Its recommendation was for the creation of a new category of Council committee, the management board, which would undertake the routine management of these functions, and make recommendations to the Council on policies and budgets. These boards should in general be chaired by a member of the Council to ensure adequate liaison. At the time of writing, three such boards have been established,[4] and indications are that they will provide an effective way of managing operational and developmental programmes undertaken by COU.

Another set of recommendations dealt with the strengthening of the university side of Council business, by internal arrangements to ensure thorough review of issues, effective communication, and adequate assistance for Council members to enable them to devote sufficient time to collective matters. The aim

[4]These boards are described in Chapter 4.

of the committee's recommendations in this area was again, in the words of the report, "for individual universities . . . to ensure their ability to participate fully in the common tasks which lie before the members of the Ontario university system, and to ensure as well that the growth of structure within the system does not supplant the autonomy of the individual universities."

Organizations or associations of personnel serving in the universities of Ontario can be granted "affiliate" status by the Council. Two such organizations have become affiliates in the past year, the Ontario Council of Directors of University Schools of Physical Education and the Ontario Council of University Health Sciences, bringing the total number of affiliates to fourteen.[5] Also during the year, the Ontario Council of Deans of Medicine changed its name to the Council of Ontario Faculties of Medicine.

An important precondition of participatory planning is the ensurance of adequate flows of information between all the individuals and groups involved in decision-making. During 1970-71, senior academic bodies in the universities have instituted regular reporting by colleague members of COU. The *Monthly Review* now has a mailing list of nearly 2,500; it is sent routinely to all members of senates and boards, and other interested individuals and organizations.[6] Many items from the *Monthly Review* are now reprinted in campus newspapers and bulletins. There were eight press conferences held over the year at which a wide range of topics were discussed; other items of interest have been conveyed to the media through press releases. A large number of study papers, research studies, committee reports and other documents were made public.[7]

Financial statements for the Council of Ontario Universities are shown in Appendix E. Expenditures in the year totalled approximately $750,000. Most of these funds are provided by the universities on a voluntary subscription basis.

TOWARDS 2000

In April, 1969, the Minister of University Affairs appointed a Commission on Post-Secondary Education in Ontario. Its general terms of reference are: "To consider, in the light of present provisions for university and other post-secondary education in Ontario, the pattern necessary to ensure the further effective development of post-secondary education in the Province during the period to 1980, and in general terms to 1990, and make recommendations thereon." Shortly thereafter, COU requested its Committee on Research and

[5]A list of committees and affiliates at November 1, 1971, is given in Appendix C; an organizational chart is shown in Appendix D.

[6]Any individual may be added to the mailing list gratis by writing the COU Secretariat.

[7]A complete listing of publications and reports of the Council of Ontario Universities and its affiliates since 1962 with information on availability is given in Appendix F.

Planning to prepare a brief for the Commission. The Subcommittee pursued its task energetically for a year and a half, and the end product was considerably more ambitious than had originally been envisioned. The final report contained chapters on post-secondary education in the emerging context of post-industrialism, the march of events (analysis of changes in the system over the past five years), the alteration of roles (professors and students), the power of numbers (historical and projected enrolment data), the model of accessible hierarchy (institutional roles to ensure optimal accessibility), the accessible baccalaureate (new approaches to generalist education), the professional ladder (institutional roles in professional education), the highest learning (graduate studies), the extension of knowledge (research), the federal role, the allocation of costs, and the interface with government.

The report, entitled "Towards Two Thousand: Post-Secondary Education for Post-Industrial Ontario," was transmitted in March, 1970, to the Commission. At the Commission's request, members of the Council attended a hearing at which a wide-ranging discussion took place on the many issues raised in the report. At the time of presentation, it was made clear that the report did not necessarily represent in its entirety the views of individual members of the Council. Unanimity, of course, could hardly be expected on a document which by its very nature was intended to be critical, provocative, and future-oriented. Nonetheless, the report was transmitted with the view of the Council that it represented an important contribution to the work of the Commission.

In the belief that debate over the future shape of post-secondary education in Ontario should be as wide as possible, copies of the report were distributed to the media, and arrangements made to have it published in slightly condensed book form by McClelland and Stewart Limited. The title of the published version is *Towards 2000: The Future of Post-Secondary Education in Ontario.*[8]

In order to give readers of this Annual Review an overview of the scope of the report, we reprint below the Epilogue from *Towards 2000.*

> *We have tried throughout to take the long-term view, and we have deliberately chosen a view as optimistic as we honestly could. Often the future is painted in darker hues. We believe, however, that given half a chance man's goodness and ingenuity will prove to be equal to the formidable difficulties ahead.*
>
> *We have emphasized the various* implications *of the long-term view: the speed of change, the new ways of looking at profit, employment and certification, the greater dependence on complex theoretical knowledge (and the resulting importance of handling such knowledge), the shifting balance of work and leisure (and the resulting opportunities for cultural*

[8]Toronto, 1971. Copies of the book are not distributed by the COU Secretariat, but are available from university and private bookstores. Prices are $6.95 cloth and $2.95 paper.

enrichment and enjoyment), and the responsibility to use the vast potential of scientific and technological resources to improve human life and solve local, provincial, national and global problems.

We have adopted accessibility *of post-secondary education as the major principle that should govern future developments. This has always been a matter of abstract justice, more recently of social right, and with the new centrality of knowledge it will become a matter of necessity. We have shown that this is going to involve a greater geographic and socio-economic outreach than before, and (eventually) an extension of the "open door" policy to the highest levels. With the existing (well documented) class structure of Canada and the way in which the dice are loaded against the children of the poor, we have examined what the post-secondary educational part of the social milieu can do to redress the balance, and we believe it can do a great deal. We suggest ways of broadening the base and opening and multiplying the upward routes of the system of post-secondary education so that no student will find himself blocked from further progress by rigidities in the system. We have urged special concern for young people in isolated and sparsely populated parts of the province. Regarding the financial support of students, we hope to see a progressive development from the present loan/grant arrangement to a greater proportional reliance on grants (subject to means tests), and we have suggested that financial credits towards post-secondary educational expenses might be accumulated by students during their years in secondary school. We visualize a multiplication of opportunities for post-secondary education across the province, and have suggested an investigation of one particular method that has an interesting potential for quality and economy.*

We believe that education is becoming a lifetime *matter, to be continued or resumed at intervals in order to keep up with the pace of change; certification or licensure will become a periodic necessity, with a concomitant need for the "re-tooling" of professional workers, including university professors and possibly extending to most workers in society. This involves an increasing interpenetration of the worlds of work and education and is the basis of two suggestions: a system of "citizens' sabbaticals," and the recognition of units of work experience in lieu of formal educational prerequisites where this is appropriate.*

We have stressed the national *importance of post-secondary education — as a unifying force within the country to foster a truly Canadian English-speaking and French-speaking civilization and culture, a means of repaying our educational indebtedness abroad and assisting underdeveloped nations, and an area where Canada's contribution could be outstanding. With this in mind we have dealt briefly with Canadian science policy and have examined at some length the role of the federal government in post-secondary education and the constitutional issues involved.*

Viewing post-secondary education as a provincial *concern, we have tried to make a case for a system that would be better integrated (e.g. through the "University of Ontario" concept for bringing the Colleges of Applied Arts and Technology into a well-defined relationship with the*

universities characterized by flexibility and vertical mobility for the students), and at the same time more decentralized, based upon the existing regional development areas where appropriate. A corollary is a single Department of Post-Secondary Affairs, and probably a single advisory body. We have looked at the capacity of the existing institutions, the expected enrolments, the gap that will develop soon even if only full-time enrolments are considered, and the costs of education as a proportion of provincial expenditures, now and in the future.

Again, in relation to the quality of life, we have given repeated emphasis to flexibility and ready response to change. We question whether over-specialization rather than over-production is the problem of graduate schools and suggest a "troika" variation in the traditional pattern of the Ph.D. We expect the interdisciplinary approaches to learning and research to increase and the organizational bases of such approaches to be shifting and resilient. The life-style of academic workers in the future is likely to be less stereotyped since there will be different roles within the academic profession filling different needs, for example, professor-researcher, professor-teacher, professor-tutor. We have suggested that since tenure is becoming anomalous it should be replaced by agreements carefully devised so as to preserve, amongst other things, the freedom of dissent. We have described the radical and non-radical views of the academic community (which seem likely to co-exist for some time), and the radically different expectations that the students of the future have as compared with those of the past, and we suggested that their emphasis on the wholeness of experience should be admissible in the "house of intellect." We have raised, though not pursued, the question whether a system of post-secondary education geared to a capitalist economy would be valid in either a welfare state or a socialist society.

Finally, though we have spoken much of change, our concern for continuity is manifest in our attempts to ensure that the timeless tasks — preserving knowledge, teaching/learning, research and criticism — will still be performed, and well performed, in Ontario.[9]

RELATIONS WITH GOVERNMENT

The authors of *Towards 2000* comment as follows on higher education/government relations in Ontario:

> Inevitably the relations of academic institutions and government bodies are sensitive, and they become more so as government provides more, most, now practically all, of the academic institutions' financial support. The relationship . . . can result in creative tension, or it can be merely abrasive.
>
> The mechanisms that have been developed in Ontario for handling these sensitive relations . . . are not an exact copy of anything to be found elsewhere . . . Those arrangements stand comparison with any jurisdiction. They

[9] *Ibid.*, pp. 168-71.

> are open, so that their operation can be understood by any of the public who are interested. They are flexible, and therefore responsive to changing needs. They facilitate close and continuous communication. And the success of their operation can be measured by the response of the system to the not insignificant challenges of the past decade. As well-informed an observer as Professor Robert Berdahl has commented that Ontario has achieved a unique and enviable solution to a universal problem.[10]

In one area, however, *Towards 2000* envisioned improvement in the planning of post-secondary education, namely in the coordination between the development of universities and other post-secondary institutions. For several years, COU has had a joint committee on cooperation with the Committee of Presidents of Colleges of Applied Arts and Technology, but this committee has met on only a few occasions. The structure of the provincial government placed support and policy development for colleges of applied arts and technology (CAATs) under a Council of Regents in the Department of Education, while the university matters were dealt with by the Committee on University Affairs and the Department of University Affairs. The Department of Education had responsibility for Ryerson Polytechnical Institute and the Department of University Affairs for the Ontario College of Art.

In recognition of the need for better coordination of post-secondary education, the Speech from the Throne on March 30, 1971, stated the Government's intention to place all of post-secondary education (with the exception of diploma schools of nursing and agricultural colleges) under the aegis of a new Department of Colleges and Universities. The resultant legislation was proclaimed to take effect on October 1, 1971.

Establishment of the new department raised questions about the existing Council of Regents of CAATs and Committee on University Affairs. Should their functions be combined in one new body (this was proposed in *Towards 2000*), or were there strong arguments for maintaining their distinctive roles? Discussions were held between COU and the Committee of Presidents of CAATs, and between representatives of both bodies and the Minister of University Affairs. Representatives of universities and the colleges found themselves in essential agreement on a position: that while improved coordination was desirable, it was also important to have a structure which would recognize the distinctiveness of the two types of institution.

The structure adopted for the new Department of Colleges and Universities takes these concerns into account. The Council of Regents and Committee on University Affairs have been retained, but coordination is provided through a joint committee with representatives of each body, and an arrangement whereby the chairman of each body sits *ex officio* on the other.

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[10] *Ibid.*, pp. 163-4.

The role of the Committee on University Affairs was given particular attention in the Report of the Special Subcommittee on the Ontario University System. The subcommittee affirmed its conviction "that a strong and independent Committee on University Affairs is vital to the effective functioning of university-government relationships in Ontario and a safeguard both to academic freedoms and to the public interest" and made a series of recommendations aimed at enhancing its strength and independence. Certain of the recommendations dealt with the membership of the CUA: that appointments be for a three-year term, with the possibility of renewal for a further term of two years; that membership be kept up to full strength; that the representation of the humanities be increased; that at least one member be bilingual; that COU be allowed to submit for the consideration of the Minister names of possible candidates, both academic and lay, as a matter of regular procedure; and that the Deputy Minister be made a full member, with the appointment of a separate Secretary, and to an appropriate extent, a secretariat.

In examining the relationship between COU and the Committee on University Affairs, the special subcommittee noted with concern a recent tendency for an adversary relationship to develop between the two bodies:

> While the Subcommittee recognizes that some degree of confrontation may be a natural element in the relationship of the two Committees, it feels strongly that an adversary relationship is not adequate or appropriate as the totality of the relationship between these two bodies. The essential objectives of the two bodies are the same and their relationship should reflect their mutual concern to find the best solutions to their common problems.

One area of concern was the annual requests for information by CUA in preparation for its fall series of meetings with the universities. The universities raised questions about certain of the 1971 information requests, as to the usefulness or meaningfulness of certain items of data. These questionnaires place heavy demands on the information-gathering capacities of institutions, and the universities have wished to have assurance that all of the data requested were really necessary. Equally, the universities wish to make sure that the data were in such a form as not to be misleading. A meeting in the summer of 1971 between the Executive Committee of COU and representatives of CUA and the Department of University Affairs led to agreement to modify certain items in the 1971 forms. For the future, CUA has agreed to consult COU in the spring of each year, in order to discuss the areas of information in which CUA is interested for the next series of meetings. It is hoped that this procedure will ensure a data-gathering exercise more satisfactory for all parties.

A unique feature of university-government relationships in Ontario is the existence of a number of joint committees between COU and CUA. These joint committees operate under a clearly defined set of procedures, and report jointly

to both bodies. The Special Subcommittee on the Structure of the Ontario University System recommended that greater use be made of such joint committees to deal with matters of common concern, and that when joint committees are established, care be taken to ensure that the mutually-agreed principles and procedures governing their operations are adhered to. In particular, the subcommittee was concerned to ensure that adequate time is allowed for consideration of policy matters by the joint committee and by both parent bodies before CUA recommendations are made to government.

Joint committees on Finance/Operating Grants and Capital Studies have existed for some time. During 1970-71, additional ones set up were the Joint Steering Committee on Educational Technology (see Chapter 4) and the Joint Subcommittee on Graduate Studies (see Chapter 3). The latter has assumed particular importance in a period where government has expressed concern over the nature and rate of development of graduate studies.

IMPROVING THE INFORMATION BASE — PROGRESS IN OBTAINING DATA FOR DECISION

In 1970-71, efforts to improve data files to aid the universities and the system in their decision-making were mainly concerned with the necessary committee work of refining data element definitions and procedures and ensuring that sensible rules of confidentiality and accessibility are formed. Following is a brief progress report on data files activities since the inception of the project.

In February, 1970, the Research Division had tabled a *Proposal for a Central Data Bank on Students and Resources of Ontario Universities* for consideration by the Council. This proposal cited numerous examples of the need for a body of compatible and easily accessible information about the universities of Ontario and argued strongly for the establishment of a "central data bank" of university information.

Five basic files were proposed to provide for information on students, staff, space, operating finances, and capital finances. The data elements to be included in the first four of these were given and a justification of the need for each data element was offered. The fifth file of information was intended as a possible addition to the data bank in the future.

The control and security of and access to the information in the proposed data bank were dealt with thoroughly in this proposal and the legitimate needs of various parties (COU, CUA, DUA and others) for access to the files were discussed.

This proposal was given approval in principle by the Council and the Research Division was instructed to proceed with its development. In June,

1970, a second document entitled *Supplementary Report #1 to Proposal for a Central Data Bank* was tabled. This document dealt with the technical aspects of the proposed system excluding the operating finances file, such as the main reports that would be produced, the computer languages and reporting system that would be used to produce them, the storage requirements for the files, the scheduling of the activities involved in establishing the data bank and the estimated cost of the project. The operating finances file was intended to be a separately developed manual file.

During the summer of 1970 the Research Division proceeded with developing data element definitions by holding a series of meetings with university representatives and by distributing preliminary definitions resulting from these meetings to the universities for comment and criticism.

Student Information

In December, 1970, the Ontario Universities' Council on Admissions proposed a central admissions file and it became evident that there was a great deal of overlap of elements intended for the student file and the suggested admissions data. It was decided that collaboration with OUCA would enable the elimination of one part of the student file. Demographic and application information would no longer be required. Instead, all such information would become available from the central application files. The student file *per se* would still be collected and processed by the Research Division.

Shortly thereafter we were informed that the Department of University Affairs and Dominion Bureau of Statistics intended to collaborate on the collection and maintenance of student information. An examination of the suggested data elements for the proposed DBS/DUA file showed that all of the proposed data elements for the data bank were included with but one exception. In addition, DUA and DBS intended to collect rather more information than COU had originally intended.

Further consultation and collaboration with DUA, DBS and the universities resulted in a decision to eliminate the second record of COU's proposed student file since all of the information that would have been contained in it is to be included in the DUA/DBS student enrolment reports and COU has been assured of access to the data.

Meanwhile, work had proceeded in the Research Division on the student admissions file and by the end of July, 1971, initial data on applications and applicants were on file and processed. Interim reports on Ontario admission patterns and characteristics were produced during the summer, and final 1971 reports were scheduled for November.

Staff Information

In January, 1971, the Research Division was visited by DBS personnel in connection with their attempts to develop a uniform and comprehensive nation-wide file on academic staff. Initially it was thought that it would be possible to collaborate with DBS in defining and developing this file, and for two months extensive contacts with DBS were maintained. Eventually, however, due primarily to the very tight schedule insisted upon by DBS and the nature of the responses we had received from the universities upon presenting our initial set of definitions, it was thought better for COU to proceed on its own and rather more slowly.

In March an *ad hoc* committee was convened to discuss the status of the academic staff file. A working group was established to study the suggested definitions of the data elements, and to describe the characteristics of an academic staff file suitable for implementation by the universities.

In May, the working committee submitted a report describing the basic features of a model academic staff file and recommending that each university be invited to establish such an academic staff file. It was also proposed that another committee be appointed to investigate problems of sensitivity and confidentiality involved in developing a provincial academic staff file from these individual university files. This further investigation is now under way.

Space Information

In July, 1970, the Research Division introduced the Health, Education and Welfare (HEW) space classification scheme as a candidate for adoption by the Ontario universities because there was much dissatisfaction with the Taylor, Lieberfeld and Heldman (TLH) definitions.[11] Some months afterwards TLH produced formal definitions of their space categories which were for all practical purposes identical with the HEW space categories. At a meeting of the space liaison officers in January, 1970, it had been decided to obtain a clear and formal statement from the Joint Capital Studies Committee as to the space classification system to be retained in Ontario. However, when that Committee met in February, 1970, it was decided that no decision could be taken until TLH had completed their space survey and produced their final report. At that time the final TLH report was scheduled for Spring 1971, but it has subsequently been shifted back to the end of 1971. It should be possible to complete the space file shortly after TLH have submitted their final report.

[11]These definitions were used in the Ontario Universities' Physical Resources Study, undertaken by Taylor, Lieberfeld and Heldman for the Joint Capital Studies Committee.

Operating Finances

The operating finance file, unlike the others, was intended to be a file of aggregated records of university operating finances reported in a uniform and compatible manner. A formal organization of finance officers was formed in 1970 and in November of that year a special staff assistant at COU was appointed to aid the Committee of Finance Officers of Universities of Ontario (COFO-UO) in this task. This Committee immediately set about the business of providing more meaningful and compatible information by appointing two task forces, the first to work on improved definitions and to design a standard reporting format, and the second to concern itself with an investigation into more sophisticated financial systems for possible implementation in the future.

During the following months the first task force progressed rapidly and a set of standard forms and definitions was designed and agreed upon by the Committee and approved by COU. The adoption of the proposed guidelines, definitions and reporting format by the universities will result in more useful and compatible financial information becoming available in the near future.

Capital Finances

Work on this file cannot begin until the space file is completed and task force studies now being undertaken by the COU Committee on Capital Financing are completed. These studies to develop parameters of space, utilization, and unit cost are expected to be completed early in 1972.

Confidentiality and Accessibility

One of the more difficult and vexing issues that has arisen as a consequence of the proposal to hold some university information centrally for purposes of research is that of privacy of information. The issue of deciding upon what constitutes a legitimate demand for information by persons or organizations has only recently begun to surface in the public consciousness. As yet there has emerged no consensus, even in the minds of those most concerned with the problem, of how an acceptable balance between individual privacy and collective utility may be reached. There are no readily acceptable answers, and we present here only a rather simplified statement of two broad aspects of the problem.

One aspect of confidentiality is concerned with elements of information and another with accessibility to whatever information is on file. Confidentiality of information requires that fundamental decisions must be made on the range of information that can legitimately be demanded of university staff and students

for maintenance on file. The accessibility aspect requires the specification of conditions under which such information would be made available to various users (internal and external to the university), as well as the design of all safeguards necessary to preserve the privacy of the collected information.

The first problem of confidentiality of information is essentially a socio-political one which can only be settled by framing a set of rules or guidelines acceptable to the majority of individuals concerned. Pending such a consensus, it is COU policy to keep universities fully apprised of all developments that touch upon the issue of privacy of information and not to call for or maintain information without specific authorization.

The problem of accessibility of information, while somewhat more technical in nature, cannot be tackled until a clear consensus on the question of confidentiality of information has emerged. As stated before, unless otherwise specifically authorized, COU policy is to release only aggregated data, i.e., data from which no individual or institution may be identified.

3.

PLANNED GROWTH

ASSESSMENT OF GRADUATE DEVELOPMENT

The Annual Review for 1969-70[1] dealt with planned growth in two sections. Under the heading "The Development of Graduate Education in Ontario: Retrospect and Prospect", the review examined some of the policy determinants which influence academic growth, and which also point to the importance of planning on the scale of the Ontario system as a whole—such factors as manpower utilization, student demand for education for its own sake as distinct from vocational preparation, the considerable extent to which graduate study necessarily consumes resources of money and of men, the dependence of post-industrial society on highly competent individuals. In the chapter "Towards Collective Excellence", the review outlined the history of Ontario's progress towards provincial planning and described some of the mechanisms which were expected to give effect to the drive for rationalization—a proposed Advisory Committee on Academic Planning, some joint graduate programmes, joint use of some expensive facilities, the intention to perform planning assessments leading to recommendations for the future development of the various disciplines, and the commissioning of a planning Study of Engineering Education in Ontario. In this review we shall again discuss some policy questions and describe the development of the mechanisms within the system.

At the time of last year's review, the senates of the universities were considering the details of a proposal for an academic planning committee. As the various universities reported, it became evident that the overwhelming majority favoured the establishment of such a committee, but only if its activities were directed specifically to planning at the graduate level. Undergraduate matters were to be considered only in so far as they might impose conditions and constraints on proposals for rationalization of graduate study. Accordingly COU requested the Ontario Council on Graduate Studies (OCGS) to prepare a by-law establishing a new format for its Advisory Committee on Academic Planning (ACAP). OCGS had formed ACAP in 1968 to advise it on planning

[1] *Variations on a Theme: Fourth Annual Review, 1969-70.* (Toronto: Committee of Presidents of Universities of Ontario.)

matters, and its members had given much thought to how graduate planning could be conducted. Since the work of ACAP will have considerable impact on various aspects of university life, the OCGS by-law provides that ACAP, although an OCGS committee, will report directly to COU on certain matters and also allows for interaction with COU affiliates other than OCGS. The details may be seen in Appendix G, but fundamentally the distinction is that ACAP reports through OCGS on matters of general policy, but reports to COU directly the results of assessments and resultant proposals for the orderly development of specific disciplines.

The responsibility of ACAP is, in broad terms, to determine the optimum utilization of resources in order to provide a diversified and reasonably comprehensive set of opportunities for graduate study in the universities of the province. The aims of graduate work may be described as the highest development of the powers of reasoning, judgment, and evaluation in intellectual concerns; as specialized training in advanced professional skills; as initiation into research or scholarly work and development of a capacity for its successful and independent pursuit; as the fruitful pursuit of research and scholarly work. If Ontario is to continue to provide and improve opportunities for her citizens to engage in such activities in the broad spectrum of subjects appropriate to an economically and intellectually advanced part of the world, it is evident that an extensive undertaking is required; nor is the need diminished by the realization that, although many of the young people of Ontario may go elsewhere for advanced education, there is the obligation both to reciprocate in the exchange with the other developed countries and to play our part in the education of the leaders of the underdeveloped areas of the world. Graduate work requires close contact between students and experienced research scholars; it requires extensive library resources; it requires sophisticated laboratory equipment; it requires stipends for the students. In short, it is demanding in its requirements of money and of talent. One concludes that graduate work is the one area of university activity where specialization of function as between universities should be most productive, where cooperative arrangements and comprehensive planning are most necessary.

Although this may be evident, there are reasons why the conclusion is not always welcomed. One of the more important of these reasons arises from the deep commitment of many academics to a role in research and scholarly work as a necessary facet of their complete contribution to their university and to their students at all levels. The need for this research involvement seems to them to imply the necessity of supervising graduate students. The proposition that graduate work involves research is so generally received that there is a tendency to overlook the fact that the converse is false. Research may often advance most effectively without the involvement of graduate students, but it is true that in

some subjects, notably the laboratory sciences, research funding arrangements are such that it is disadvantageous for a professor to be without graduate students. If, then, rationalization of resources suggests that some department have no graduate programme in an area of its discipline in which it must nevertheless have professors, we must endeavour to find ways to obviate any comparative disadvantage they might experience in maintaining an active scholarly life.

Planning of the kind which is ACAP's responsibility clearly involves evaluation of the present strengths and weaknesses and the consequent delineation of desirable directions of growth, at a level of detail so specific and so intimate that the work can proceed only with the full participation of experts in each discipline. Consequently another part of the system is the "discipline groups". These consist of a representative from each university that is interested in carrying on a graduate programme in the area which is the group's concern. Many of the groups have responsibility for an area of study coterminous with the traditional departments (e.g., Chemistry, Sociology) but others have planning responsibility for cross-disciplinary study (e.g., Planning and Environmental Studies). It is envisaged that a discipline group would be formed to consider the development of graduate study in any significant new field. Indeed, by setting up such groups, ACAP may be able to stimulate innovation.

A large part of ACAP's activities will consist of monitoring and assisting the work of the discipline groups. However, it is evident that a group, often composed of the chairmen of departments, can make only so much progress on the basis of the part-time efforts of persons who find it difficult in the final analysis to detach themselves from their institutional responsibilities and examine rationalization from the system viewpoint. Hence there will be the need for disciplinary planning assessments carried out by ACAP, employing independent experts commissioned for each such study. These studies should lead to specific recommendations for the growth of the discipline and the distribution of special roles amongst the universities concerned. They must be carefully organized; a significant test of the strength of the university system will arise when it must show wisdom in establishing the procedures for these assessments and maturity in its reaction to their findings.

The urgency and magnitude of ACAP's activities indicated that it would require full-time attention and COU has appointed Dr. M. A. Preston, formerly Dean of Graduate Studies at McMaster, to become ACAP's Executive Vice-Chairman. The members of ACAP have been selected to provide a balance of groups of disciplines and of universities; their names appear in Appendix G. Several were members of the previous ACAP and provide valuable continuity.

It is important that there be an opportunity for exchange of views between the Committee on University Affairs and COU on a matter as sensitive as graduate planning. It was agreed in December, 1970, to establish a Joint Sub-

committee on Graduate Studies. Its co-chairmen are the Chairman of CUA and the Chairman of COU, and it has six other members, three (Dr. Rossiter, Dr. Gerstein and the Deputy Minister or his representative) from CUA and three (Dr. Macdonald, Dr. Deutsch and Dr. Preston) from COU. This joint subcommittee has held three meetings to date, which have been valuable in providing an opportunity for clarification of viewpoints and which have also led to recommendations to the subcommittee's parent bodies.

In the late autumn and early winter, CUA expressed considerable concern over what it saw as too large a graduate enrolment, particularly in certain subjects, and also over the number of non-Canadians enrolled as students. The government proceeded to take four actions: an embargo on new graduate programmes, a marked reduction in the size of the Ontario Graduate Fellowship programme, limitations on the earnings of new graduate students, and a substantial increase in formula fees for graduate students. Two of these actions were given practical effect through interpretations of formula counting. The embargo took the form of a refusal (until such time as the discipline planning assessment was completed) to count for formula income any students enrolled in a "new" programme; at first "new" was taken (on the urging of the Joint Subcommittee) to mean programmes not submitted to CUA for planning purposes before the fall of 1970, but later DUA took "new" to mean any programme in which there was no enrolment in the Winter term of 1970-71. The third action provided that a student could not be considered to be full-time if his earned income from provincial funds exceeded $1800 in a twelve month period; students already in an Ontario graduate school were exempted from this provision.

The fact that CUA felt it desirable to recommend such action emphasizes the urgency of graduate planning on a system basis, although, of course, the proposals for the establishment of ACAP were put forward before these governmental actions were foreseen. Preliminary figures make it clear that the effect of these government actions on enrolment in 1971-72 will be quite marked, and perhaps not entirely what the government desired. It is likely, for example, that there will be a distinct reduction of growth in graduate studies in the humanities and social sciences, areas where Canada's graduate work has been noticeably insufficient. But such unplanned results are inevitable consequences of such broad-scale policy manipulations, or, more picturesquely, of the use of such heavy and blunt weapons. Instead one needs sharp machine tools, specific to the delicate job at hand. For the growth of some disciplines needs encouragement, and the growth of others needs curbing; this is not achieved by a universal embargo. Also, although COU has supported the proposition that the most generally satisfactory way of influencing the size and composition of the gradu-

ate student body is through the students' financial support, it has emphasized that a carefully detailed "package" is essential.

CUA has recognized that the embargo on all new programmes is unnecessarily broad. Initially, CUA provided for an appeal by a university proposing to institute a specific programme of unusual importance or of a unique character. It was agreed that ACAP would make a recommendation on each appeal, and during May, 1971, ACAP did, in fact, act in this way. It became apparent, however, that, in the absence of detailed planning, only the loosest criteria could be formulated for such judgments, and that the judgments of ACAP and of CUA were not coincident. This situation has led the Joint Subcommittee to propose to CUA that the embargo be removed except in certain specific disciplines (about a dozen) where the need for rationalized planning is more urgent, and in which ACAP will carry out disciplinary planning assessments over the next two years. This should reduce the need for future appeals against the embargo, but if any do arise it is proposed they be dealt with by CUA directly.

The time required to carry through a planning assessment will depend on the scale of the discipline, the preparedness of the discipline group for action, and other factors, but will generally be a year or so. Funds are available to begin about 10 assessments in 1971-72 and it has been decided that these will include sociology (with criminology), economics, library science, chemistry, earth sciences (including geology, physical geography, etc.), social geography (including planning and environmental studies), and education. An additional list comprising history, religion, political science, business administration/management science, and law has been established; initial steps in these five areas will be pursued in 1971-72, with priorities to be decided later, based in part on the relative rates of progress in each of these areas. It must, however, be emphasized that the intention is that *all* discipline groups be engaged in planning activity, whether or not their subject is high on the priority list.

The choice of priorities is based on various factors. One which is clearly important would be the knowledge that several Ontario universities were planning initiatives in a particular discipline. Another would be the allegation (or the fact) that there was an imbalance between the supply of holders of advanced degrees in the subject and the demand for their services on the part of potential employers. It is very difficult to be precise about this latter factor; economic variations and the length of the period of doctoral education make such forecasting hazardous. However, in general terms trends can be established. COU has been concerned to estimate the future Ontario academic market, and is continuing studies in this area.

The Research Division of COU held an invitational conference in July, with papers by representatives of several federal agencies working on the problem

of doctoral supply and demand. It seems clear that the Canadian picture differs from that in the U.S.A. in a number of important respects, and that, contrary to American expectations, there are a number of significant fields in which we should not expect even a temporary surplus of PhD holders. In others there may be a surplus in some sense but there are indications that after 1985 there may be a deficit position in most fields both in the U.S.A. and Canada. (A summary of the conference is given in Appendix H.) Such questions must be a matter for continuing examination, and will bear on each planning assessment.

We have already mentioned that COU believes that a vital component of planned growth is some control of the nature and size of the graduate student body, and that exercise of this control through student stipends is the mechanism most appropriate to our society, in a sector where opportunity, accessibility, and academic standards must all be considered. An arrangement of scholarships, fellowships, assistantships and loans should have sufficient flexibility to incorporate incentives or disincentives suggested by planning decisions and also to allow for the freedom of our best young scholars to pursue those studies which seem significant to them. Such a scheme of support is certain to be complicated, but OCGS has developed a proposal which COU adopted in October, 1970, and forwarded, with the recommendation that it be implemented, to CUA and also the federal scholarship agencies—Canada Council, National Research Council and Medical Research Council.[2]

It is important that a student's choice of university within the province be made primarily on academic grounds without undue influence from purely financial factors. It is also important that the available resources for student support be distributed equitably, with academic promise the principal determinant of support differentials. Both these principles were incorporated in the OCGS support scheme. When the limitation on university earnings of a full-time student was imposed, it was recognized that to preserve these two desiderata it would be necessary also to have inter-university agreements on the extent of other forms of student support. On OCGS recommendation, COU endorsed a provincial set of maximum incomes for various categories of students. Although one university made a few exceptions to the schedule for this year, it is expected that similar self-legislated constraints will be fully observed in the future.

It is frequently suggested that if graduate enrolment is to be reduced, either in total or in specific areas, this can be best accomplished by raising admission standards. This suggestion would have validity only if all the universities of the province had demonstrably similar interpretations of the great variety of aca-

[2]*Report to the Ontario Council on Graduate Studies of the Committee on Student Financial Support* (Toronto: Committee of Presidents of Universities of Ontario, 1970).

demic transcripts which are presented by applicants. By suggesting that the great majority of the fellowship support be awarded in province-wide competition, the proposed support scheme makes possible an equitable raising of standards — indeed, if there be a shortage of fellowships, the scheme makes the raising of standards inevitable.

The whole system of graduate student support is one of the most significant determinants of the quality and strength of our graduate programmes, and hence, ultimately, of the university system. During the year, OCGS has established a Standing Committee on Student Support, chaired by Dean J. Ruptash, and looks to it for guidance in the urgent task of presenting specific recommendations to government for 1972-73.

RING OF IRON

Following its meeting on October 5, 1971, COU issued a statement on the recommendations contained in *Ring of Iron: A Study of Engineering Education in Ontario*.[3] Release of this statement marked the culmination of a process which began over three years ago, when COU decided that a comprehensive review of engineering education in the province should be undertaken. The Committee of Ontario Deans of Engineering (CODE) was requested to draw up plans for such a study. The CODE proposal was for a study to cover both the undergraduate and graduate fields, and examine student flows, curricula, research, staff, facilities and costs with a perspective developed from an analysis of the career patterns of engineering graduates. The objective was to create a master plan which might be used as a guide for rational growth of engineering education during the 1970s, to provide for the highest attainable quality, the best use of resources, an opportunity for innovation, and maximum freedom of choice for students.

The strategy chosen for this investigation was that of a "commission", whereby an independent study group would be appointed, and requested to produce a report which would be published as received. Work commenced in October of 1969, with the appointment of a full-time director under the guidance of a liaison committee representing COU and CODE. Dr. Philip A. Lapp, an engineer from industry, was appointed study director. The addition of two other members formed the study group. The two, appointed on a part-time basis, were Dr. J. W. Hodgins, former Dean of Engineering at McMaster Uni-

[3] *Ring of Iron: A Study of Engineering Education in Ontario.* (Toronto: Committee of Presidents of Universities of Ontario, 1970).

versity, and Dr. C. B. Mackay, former President of the University of New Brunswick.

In consultation with the engineering schools, a questionnaire was developed, calling for the generation of data from each university. In addition, a brief was received from the Association of Professional Engineers of the Province of Ontario (APEO). These submissions formed the basis upon which many of the recommendations were developed. The study group travelled extensively—132 organizations were visited in Canada, the United States and Europe, and informal hearings were held at each Ontario university, when members of the study group spoke with students, faculty and staff. More than 300 students were involved in these discussions, and a separate student questionnaire provided a variety of viewpoints from several hundred more.

With assistance from the Research Division of COU and outside consultants, the study group initiated major research in several areas. Detailed enrolment projections to 1980 were undertaken, projections of the demand for engineers in Canada and Ontario were analysed, the substitution between engineers and technologists was investigated, and a method developed for determining unit costs in educational programmes was applied to data on the Ontario engineering schools. Each of these studies was published in a series of supporting research reports.[4]

The report, *Ring of Iron*, was received by the Council at its meeting in January, 1971. A process of review of the report's recommendations was established, whereby the Committee of Ontario Deans of Engineering requested engineering faculties to submit briefs in response to *Ring of Iron* which, together with briefs from discipline groups, would be used as a basis for preparing a brief from CODE to COU. The necessity for study of the report by each university concerned, as well as by the faculties of engineering, was recognized by requesting the dean of engineering at each institution to serve in a liaison capacity to convey the views of his university as well as those of the engineering faculty itself to CODE. Other briefs were prepared by the Ontario Council on Graduate Studies, commenting on the recommendations in the area of graduate studies, and by the Association of Professional Engineers of the Province of Ontario.

After a study of the three briefs, COU developed its own position in the form of a statement containing 34 specific recommendations with background

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[4]The reports are: Philip A. Lapp, *Undergraduate Engineering Enrolment Projections for Ontario, 1970-80*; M. L. Skolnik and W. F. McMullen, *An Analysis of Projections of the Demand for Engineers in Canada and Ontario and an Inquiry into the Substitution between Engineers and Technologists*; Ivor W. Thompson and Philip A. Lapp, *A Method for Developing Unit Costs in Educational Programs.* (Toronto: Committee of Presidents of Universities of Ontario, 1970).

discussion.[5] A number of the recommendations in *Ring of Iron* were explicitly or implicitly accepted by the provincial bodies which commented on the report, and also endorsed by COU. Many recommendations were accepted with reservations or amendments, for the most part minor. There were a small number of recommendations in the report with which COU did not agree, for reasons which were stated.

The first set of recommendations concerned undergraduate education. *Ring of Iron* identified a problem at the point of entry—with less structured high school curricula, engineering schools would either have to loosen their entry requirements or be faced with steadily declining numbers of applicants. Also it was thought desirable that engineering students be drawn from a wider spectrum of Grade 13 students. The *Ring of Iron* study group recommended that high school credits in physics and chemistry no longer be required. The COU recommendation recognized the continuing importance of the physical sciences, but proposed that the basis of admission be knowledge and aptitude rather than the rigid requirement of course credits.

In the undergraduate curriculum, the study group gave particular attention to laboratory experience, arguing for greater innovative opportunity and a policy to ensure that equipment is up to date. The importance of continuous monitoring of the curriculum was also stressed. These emphases received the support of COU.

In its discussion of graduate studies in engineering, *Ring of Iron* proposed exploration of new ways to facilitate part-time study. An experiment in the Ottawa area with a "talk-back" television network was proposed and endorsed by COU. *Ring of Iron* did not contain an assessment of the relative quality of graduate programmes, but proposed that this should be done in future on the model of the comparative rating system in the United States under the auspices of the American Council of Education. This proposal was rejected by COU, which believes that the aims to which it was directed will be much more satisfactorily met by the succession of planning assessments now proceeding.

Ring of Iron also expressed concern over the lack of design or systems synthesis in graduate programmes in engineering. COU concurred with a recommendation that the criteria of acceptability of graduate degrees in engineering be recast in order that a thesis based on design or systems synthesis might be suitably assessed.

A number of recommendations were on the interface between the engineer-

[5]The COU statement and the three analyses by provincial bodies have been published under the title: *Statement by the Council of Ontario Universities and Responses by Committee of Ontario Deans of Engineering, Ontario Council on Graduate Studies, Association of Professional Engineers of the Province of Ontario to Ring of Iron: A Study of Engineering Education in Ontario.* (Toronto: Council of Ontario Universities, 1971.)

ing schools and the profession. The COU recommendations in this area supported the general intent in *Ring of Iron* to strengthen the links between education and the profession. Key recommendations supported extension of the practice of joint appointments between universities and industry, replacement of the present APEO examinations by part-time university undergraduate studies, and further exploration of a proposal that the universities participate in a system of periodic re-qualification of practising engineers.

Appropriate enrolment levels in order to meet manpower requirements and to create schools and programmes of viable size were the subject of careful and detailed analysis in *Ring of Iron*. At the undergraduate level, the report recommended maximum freshman intakes and total size at steady state for each engineering school in the system. In this area, COU concurred with recommendations made by CODE that five-year targets for the total system enrolment be determined and reviewed annually by CODE and COU, and that initially the total enrolment as projected in *Ring of Iron* be accepted. Freshman intake would be accepted as the control factor for the enrolment in individual schools and unless agreement exists among all engineering schools in the system, maximum recommended freshman enrolments would not be exceeded.

One of the most controversial subjects addressed by *Ring of Iron* was graduate enrolment. COU concurred with a recommendation that over the next two years the estimated graduate enrolment of 2,000 full-time equivalent students in 1970-71 be reduced by 17%, and that thereafter graduate enrolment be equated to the number of previous year's bachelor graduations. The report recommended specific numbers of PhD enrollees for each of the universities and discontinuance of the PhD enrolment in certain universities. COU felt that the reasons for the numbers chosen or for the elimination of certain doctorate programmes were not fully documented in the Lapp report. COU also agreed with CODE and OCGS that attention must be given to the numbers of doctorate enrollees by discipline as well as by university. For these reasons COU recommended that for the year 1972-73 doctorate enrolment be reduced in each university below the projected figure for 1971-72 by a *pro rata* percentage. Preliminary acceptance of this method for reducing PhD enrolment was based on plans for discipline planning assessments on PhD programmes to be initiated immediately and completed as rapidly as possible. These assessments will be carried out through ACAP in cooperation with CODE; they are to incorporate capability, demand and quality correlates, and are to be used to provide specific recommendations on changes for the total PhD enrolment, and for the division of the enrolment amongst universities and amongst disciplines. The assessments are to incorporate a review of the effects of the *pro rata* reductions in 1972-73, and to recommend a mechanism for continuing review of PhD enrolments.

In recognition of the need for improved manpower information as a base for enrolment planning, COU gave its support to the intention of the Canadian Council of Professional Engineers to establish a permanent Canadian Engineering Manpower Commission in order to provide national and regional data on engineering manpower in Canada.

The central concept of *Ring of Iron* was that of an integrated system of engineering education, in which each school would play its distinctive role, to provide in the Province a variety of programmes and approaches. A number of recommendations on the roles of individual schools were either endorsed unaltered by COU, or accepted with amendments in wording consistent with the original intent. Examples of the special roles recommended for individual schools are an emphasis on graduate studies and research in environmental engineering at Western Ontario, an undergraduate programme emphasizing humanities and social sciences at Windsor, and a two-year degree programme designed for diploma technology graduates at Lakehead.

Several recommendations relating to individual engineering schools did not receive the support of COU. The first was a recommendation that the Faculty of Engineering at Waterloo be reorganized into a technological university, with a separate Board of Governors and Senate, but in affiliation with the University of Waterloo. This recommendation appeared to COU to relate entirely to matters of organization within a single university and COU did not feel it would be proper to offer advice.

For the University of Ottawa, *Ring of Iron* recommended that a common-core undergraduate curriculum be created similar to that at Carleton, and that graduate students and faculty research be undertaken in a joint programme with Carleton. In rejecting this recommendation, COU agreed with comments made by CODE, namely, "CODE recognizes Ottawa's bilingual/bicultural nature and supports the continuance of graduate and undergraduate programmes in the traditional engineering disciplines."

Perhaps the most controversial recommendation of the report was that the existing two-year partial engineering programme at Laurentian University be terminated. COU did not comment directly on this recommendation but instead noted that both the arguments in support of this recommendation and those for continuing the programme have substance. COU was impressed with the comments of CODE that "in spite of the arguments for termination of Engineering at Laurentian . . . there are social and geopolitical factors which must be considered. Sudbury is a community of some 160,000 of unique importance to life and development of Northern Ontario." In the last analysis the question is a matter of public policy and COU suggested that Laurentian University consult with the government of Ontario before making a decision.

To provide for review of new developments in undergraduate engineering

programmes, COU endorsed recommendations for similar mechanisms to those developed by OCGS for graduate programmes. CODE will undertake the qualitative appraisal of proposed new undergraduate programmes, using essentially the same procedures employed by OCGS. CODE will also evaluate the need for each new programme with respect to academic, cost, and manpower considerations.

COU has recommended to the universities and to the Committee on University Affairs that the COU statement in its entirety be used as a basis for action on *Ring of Iron*. In making this recommendation, it was understood that individual universities should develop their own responses, consistent with the pattern recommended for the system.

From this work has emerged valuable experience of methods which can be used for undertaking future planning assessments of graduate studies. The results of the study provide concrete evidence that the universities collectively are capable of undertaking critical self-evaluation. It is clear that the steps subsequently taken by the universities will be watched closely as a test of the concept of collective autonomy and as a measure of the determination and ability of the universities to manage their own affairs and work together in the best interests of the public of Ontario.

4.

AREAS FOR COOPERATION

LIBRARY COORDINATION

Variations on a Theme reported the inauguration of the Ontario Universities' Bibliographic Centre Project (OUBCP), and described the range of cooperative activities being undertaken under the auspices of the Project and the Ontario Council of University Librarians (OCUL). During the past year, work in this area has consisted largely of continuing the activities begun in the Project's initial year, and of reconsidering the functions and organizational structure most appropriate for the further development of library cooperation.

Library coordination was one of the areas where the Special Subcommittee on the Structure of the Ontario University System recommended the establishment of a board to manage routine functions and to recommend policies and budgets to COU. It was apparent to COU that a continuing staff unit would be required to develop and implement programmes of library cooperation, and the decision was taken to create an Office of Library Coordination (OLC) as the successor to the Bibliographic Centre Project. Mr. C. Donald Cook, who was Research and Planning Officer for the Project, is Director of the Office. The Office reports for policy purposes to a Board for Library Coordination. At the time of writing, this Board is being established, under the chairmanship of Dr. Paul Hagen, Dean of Graduate Studies at the University of Ottawa, and a former member of COU. Membership on the Board includes three librarians, three graduate deans, and three members of the professoriate. The slate was drawn up after various interested groups were invited to make nominations. With the establishment of this Board, the Advisory Joint Council on the Coordination of University Library Research Facilities, which had supervised the OUBCP, has been dissolved at its own request.

The Office of Library Coordination has continued its close collaboration with the National Library of Canada in the development of a machine-readable national union catalogue and other national services which are relevant to Ontario university libraries. Since the establishment of national standards is a prerequisite to the exchange of bibliographic information, the National Librarian has appointed Task Groups, consisting of members of the National

Library staff and of the library profession throughout Canada, to recommend standards for cataloguing data and for the computer format in which this information would be communicated. Several staff members from Ontario university libraries are on these Task Groups, and the Director of the OLC has been in close communication with the National Library, so that Ontario university library requirements can be met to the fullest extent possible. The OLC has designed and is administering a number of the questionnaires being used to supply background data for the Task Groups. It has also turned over to the National Library the work already done among the Ontario university libraries in the establishment of acceptable minimum bibliographic elements and on general cataloguing practices. This work is being continued in conjunction with the National Library, and will assist not only in the preparation for a national bibliographic network but also in the development of cooperative or centralized technical services operations.

During the past year, a study of the characteristics of interlibrary lending was undertaken, in order to assist in determining with more precision the types of material in demand which cannot be supplied by the reader's home library. It is of interest to note that Ontario university libraries supplied to each other 41.2% of the material needed, but that 54.2% was obtained outside the system; 4.5% was not available. The type of material most in demand was the article in a scientific journal of recent date. A secondary result of the study has been information leading to the improvement of interlibrary loan procedures among the libraries.

In another examination of interlibrary lending, the Ontario Council of University Librarians authorized the extension of interlibrary loan to undergraduate students in three test libraries (Brock, Queen's and Western), to assist in determining the extent to which each library is, in fact, self-sufficient for its undergraduate needs, as is set forth as one of the goals for the system. The data have been gathered during the 1971 spring term and are now being analyzed.

The Office of Library Coordination maintains liaison with the Office of Computer Coordination (described in the next section) in order that both units will be aware of interests of mutual concern. The current proposal for an inter-university computer communications network is of major importance to the libraries, since the existence of such a prototype network would enable experimentation with interlibrary communication of bibliographic data at an earlier date than had been anticipated.

The OCUL Standing Committee on Cooperation in Acquisitions has had among its initial concerns the establishment of means whereby major purchases which meet certain criteria can be checked through the Office of Library Coordination so that 1) unintentional and unnecessary duplication will be avoided, and 2) agreement may be reached to acquire for the Ontario university library

system needed works which would not otherwise be purchased because of cost too great for a single library.

With other OCUL committees, the OLC has worked on the possibility of a uniform identification card for interuniversity borrowing, compatibility in computer-assisted circulation systems, and on library building standards.

There are cooperative activities which may be useful only to some of the fourteen libraries or which can be begun by several libraries with the expectation that others will participate as the success of the cooperation can be demonstrated. The Office of Library Coordination has worked closely with Guelph and Western in developing means for cooperative use of the MARC tapes from the Library of Congress and for joint use of the scheme developed by the University of Guelph for the control of government documents. With another pair of libraries, OLC is now working on arrangements with a commercial firm to supply a certain portion of current purchases completely catalogued and ready for the shelf; in addition, this service can provide a bibliographic record on tape, so that the beginning of a machine-readable union catalogue is a possibility in the foreseeable future. Other libraries may join this experiment shortly, and if the trial period proves successful, this can be extended further.

In the spring of 1971, COU requested that the Office of Library Coordination give a high priority to investigation of centralized technical processing and its alternatives. A feasibility study has been approved, which will be limited to processing operations for current in-print monographs in English. To determine the relative costs of current technical services and other alternatives, costs studies will be conducted on acquisitions, cataloguing, records production, shelf preparation, and related services in university libraries. Studies will also be done on purchasing duplications to determine the amount, subjects, and types of duplication and the time span in which duplication occurs. In the examination of alternatives, the experience of university users and other information on existing processing centres will be studied.

One of the achievements which may be attributed, at least partially, to the work of the Office of Library Coordination is the increased communication among the operating staff members of the participating libraries, and a growing interest and belief in cooperative effort. This is an important step forward and has begun to form a base on which cooperative activity of the future can rest more firmly.

COMPUTER SERVICES: BLUEPRINT FOR COOPERATION

In the fall of 1969, a Computer Coordination Group was established with full-time staffing to foster cooperative effort in the provision of university

computer services. During 1969-70, a number of task forces and interest groups were set up to explore various areas in which there was potential for realizing economies and improving the quality of computer service through cooperative effort. (The beginnings of these activities were described in *Variations on a Theme.*[1]) The year 1970-71 saw significant advances in the facilitation of cooperative activity, and the emergence of a clear focus for future work.

The major focus of effort has arisen out of the work of the Task Force on Data Communications, which was set up to develop proposals to meet the future computing needs of universities, taking into account the need to compensate for geographical remoteness and recent advances in technology which facilitate data communications. In the fall of 1970, the Task Force submitted a preliminary proposal for phased development of a computer communications network for Ontario universities. The first phase was to foster an environment within the system of universities conducive to exchanging computing services through a working network based on conventional communications technology. By May, 1971, bilateral communications links had been established between Queen's and Ottawa, Carleton and Ottawa, Trent and Carleton, and Western and Ottawa. Two of these links are particularly significant for their possible long-term implications. The University of Ottawa and Queen's University have reached agreement on the provision of a specialized data bank service at the Ottawa computing centre, for which the data base is the QUIC/LAW body of legal information developed by the Faculty of Law at Queen's. This facility will enable users at Queen's and other universities to make enquiries on the system using typewriter-like terminals and communication lines. Trent University and Carleton University have concluded an agreement covering at least one year, during which Trent will purchase all of its computing services from Carleton in the expectation that Trent will be able to achieve a considerable reduction in its expenditure for computing.

During the first phase, work was proceeding on the development of a major design for a future computer network. This design was completed by July, 1971, and will constitute the basis for long-run planning of the network. The benefits expected from development of a network are as follows. First, the network should lead to long-run rationalization of the use of computing resources. Secondly, "load sharing" should produce immediate cost reductions by permitting a university to purchase services from other universities temporarily with excess capacity. Thirdly, the network should encourage the development of "centres of specialization" whereby, for example, a data base developed and maintained at one centre may be reached by users distributed over the network. Fourthly, the network should help to avoid duplication of resources such as

[1] *Variations on a Theme: Fourth Annual Review, 1969-70.* (Toronto: Committee of Persidents of Universities of Ontario, 1970.)

programme libraries, data bases and special hardware devices. Finally, all users, regardless of the size of university or geographical location, should be provided high-quality service.

Users will have access to a diverse population of large-scale computer systems. The network itself will be invisible to both the user terminals and the computer systems. With regard to reliability, the network is to provide a level of performance as good as, or better than, that possible through direct point-to-point connections.

In reviewing the efforts in computer coordination over the past year, COU has concluded that the development of a network with the above characteristics held the highest prospect of "pay-off" of any of the activities undertaken to date. It has therefore requested that for 1971-72, development of the network become the major focus of staff activity.

A number of other activities, however, are directly supportive of network development, and these are proceeding apace. One of these is the formulation of a realistic set of arrangements for the charging of computer services, obviously a prerequisite for inter-university trade.

In June, 1970, the *Report of the Task Force on Computer Charging*[2] was submitted to COU. This report covered costing, pricing and budgeting for computing services and included recommendations on arrangements for inter-university trade. The report was referred to the Committee of Finance Officers —Universities of Ontario (COFO-UO) for evaluation, and in general the Finance Officers gave support to its findings. Upon receipt of the comments from COFO-UO, COU endorsed the application in Ontario universities of the principles of the *Report of the Task Force on Computer Charging* and urged universities participating in computer network development to adopt these principles in 1971-72. Since that time a joint task force with COFO-UO has been established to pursue implementation of the principles of the report and to give further study to certain aspects of computer charging which remain to be resolved.

COU has approved for 1971-72 establishment of a Task Force on Coordinated Planning of Computing Facilities which has been asked to recommend to the universities a mechanism for joint planning of computing facilities, taking into account the long-term implications of development of the computer network and its impact on independence and inter-dependence of the universities.

Other activities in computer coordination are organized through "interest groups". The thinking behind the establishment of interest groups is that co-operative action by a number of knowledgeable, interested persons often pro-

[2]*Report of the Task Force on Computer Charging.* (Toronto: Committee of Presidents of Universities of Ontario, 1970.)

duces results better than if individuals acted separately. Interest groups in the area of computer services are staffed by voluntary participants from the computer centres of various universities.

Among these groups, the Training Resources Interest Group (TRIG) has as its terms of reference: to identify and evaluate the needs for training of staff and users of computer centres; to evaluate educational facilities available to the universities; to recommend on cooperative purchases and/or development of suitable resources; to recommend on the means of distribution to the universities. The first activity of the Training Resources Interest Group was a survey to identify training and associated costs at university computing centres. The next project was identification of commercial training aids and evaluation of commercially produced computer training films and video tapes. The result was that, with participation by most of the Ontario universities, negotiations were undertaken and a cooperative purchase agreement concluded, whereby participants can obtain films as needed, according to their financial contributions, with the cost advantages achieved under a single, large contract. Another recent activity undertaken by TRIG is the preparation and presentation of courses to computing centres.

An area of increasing importance in the computer field is that of computer system performance measurement and evaluation, which involves development of systematic ways and means to identify and quantify activities related to the hardware and software computer components. Systems are fine-tuned by changing hardware, software or loading in order to optimize performance. The University of Guelph received support for the acquisition of measurement devices for system monitoring, and this activity led to establishment of an inter-university interest group concerned with the planning and coordination of performance measurement in the universities. The System Performance Measurement and Evaluation Interest Group has surveyed performance evaluation activities in the universities and has held meetings and technical seminars to upgrade technical specialists in the university computing centres. A report is available which gives a detailed analysis of the methodology and past experience in System Measurement.[3]

During the previous academic year, a Cooperative Library Interest Group was set up to recommend to the universities: programme library classification structures; programming standards and conventions for library programmes; standards of documentation; programme evaluation procedures; development and acquisition of specific programming packages; development of a cooperative computer programme library system. The first result of the interest group's

[3]*Report by the Interest Group on System Performance Measurement and Evaluation.* (Toronto: Committee of Presidents of Universities of Ontario, 1971.)

activities was publication of a technical report describing nine specific projects that had been pursued.[4]

At its meeting in May, 1971, the Council of Ontario Universities endorsed the establishment of an Office of Computer Coordination as of July 1 to replace the existing arrangements for the Computer Coordination Group. The new Office, which retains the original objects of the Computer Coordination Group, is under the direction of Mr. M. P. Brown, who has served as Director of the Computer Coordination Group since its inception.

To direct the activities of the Office of Computer Coordination and recommend policy to COU, the Council also approved the creation of a Board for Computer Coordination, with membership including the Chairman of the COU Committee on Computer Services, one vice-president, one member each drawn from the fields of computing science, social science and natural science, and the Executive Director of COU (ex officio). The Board's first Chairman is Professor W. F. Forbes of the Faculty of Mathematics at the University of Waterloo, a former COU member.

A SYSTEMATIC APPROACH TO INSTRUCTION

There have been many efforts over the past few years to apply the fruits of technology to the instructional process. And yet such efforts have made little overall impact on the way in which university education is pursued, and there have been few broad and balanced assessments of the results which can be realistically expected from the use of technology in teaching.

With the aim of undertaking a major review of the state of knowledge and experience in this field, COU and the Committee on University Affairs agreed in the spring of 1970 to establish a Joint Steering Committee on Educational Technology. In May, 1970, the Steering Committee engaged Mr. Bernard Trotter, Head of the Office of Academic Planning at Queen's University and formerly supervisor of public affairs for the English-language networks of CBC, as Director for a study on educational technology. The Study of Educational Technology was to evaluate various applications of educational technology, broadly defined (including educational television, other audio-visual media and programmed instruction), in the enhancement of university-level education. The study was to focus on both benefits and costs, and investigate experience in the Ontario universities and elsewhere. In January, 1971, Mr Trotter submitted his report, entitled *Television and Technology in University Training.*[5]

[4]*Report of the Cooperative Library Interest Group.* (Toronto: Committee of Presidents of Universities of Ontario, 1971.)

[5]*Television and Technology in University Teaching.* (Toronto: Committee on University Affairs and Committee of Presidents of Universities of Ontario, 1970.)

The conclusions reached and recommendations made in *Television and Technology in University Teaching* have been recognized as having far-reaching and important implications for the future. The Report suggested that rather than considering the potential values of single teaching and learning technologies in isolation, future work should aim at nothing less than a fundamental review of the whole instructional process. Defined in its broadest sense, educational technology concerns the concept of system, and thus, to apply technology to education will involve a systematic approach to the entire educational process, and consequently, will require examination of curricular objectives and assessment through careful trial of various methods to enhance teaching and learning activity. Such systematization in turn implies collective effort. From these observations arose two of the Study's recommendations: 1) to set up in Ontario a Centre for Instructional Development to assist faculties of the universities in improving the effectiveness of instructional processes in objectives, content and methods, and 2) to provide support to inter-university disciplinary groups wishing to explore production of new learning materials by means of a course-team approach. Following discussion of these recommendations, the Council of Ontario Universities at its June, 1971, meeting gave approval in principle to the establishment of such a Centre, and authorized its members on the Steering Committee on Educational Technology to develop a specific proposal for implementation. At the same time the Council agreed to invite groups representing discipline areas to submit proposals for support of development of new learning materials using a course-team approach.

The proposed Centre for Instructional Development would help train instructional development consultants, provide consulting services to faculty in the universities, and collaborate with discipline groups on a single- or inter-university basis in defining instructional objectives, selecting an appropriate mix of teaching resources (including media and other approaches) and evaluating the results. The initial aim would be to have the Centre dedicated to solving practical problems. It would be provided with a mandate and means to support initiatives by province-wide university discipline groups interested in developing instructional materials by means of a course-team approach. The financial support would be justified on the basis of expected savings and should be considered as risk investment, most to be recovered later from universities using the materials produced.

Shortly after the completion of *Television and Technology in University Teaching*, the Steering Committee considered a request to support a workshop conference on the teaching of university biological sciences. This first example of the type of discipline area initiative thought worthy of support led to a successful conference in the summer of 1971. A report which will be available to interested persons is expected by the end of 1971.

Areas for Cooperation

On the basis of enrolment projections which indicated the likelihood of a major shortage of university places developing by the mid-1970s, mainly in undergraduate general arts and science programmes, *Television and Technology* saw an opportunity to develop new patterns of instruction, rather than continuing to multiply opportunities on the pattern of existing universities. In his Report, Mr. Trotter outlined the possible creation of a new, academically self-governing, degree-granting institution to offer a new kind of general degree programme comprising a limited range of multi-disciplinary courses, using centrally developed, integrated packages of instructional materials, including printed, audio, and visual items produced by highly qualified course teams, and serving students located in regional centres at various geographical points throughout the Province.

The function of the proposed institution would be to offer a new kind of general degree programme at a level and with standards at least equivalent to work in general programmes presently available at existing Ontario universities. Administration and course development would be handled centrally with remaining faculty located at various geographical points throughout Ontario. The majority of students would be full-time and would regularly attend a regional centre to view and listen to centrally produced visual and audio course materials and to attend tutorials and interact with fellow students and professors. Courses offered would be multi-disciplinary and few in number. Teaching staff at regional centres would be full-fledged academic faculty with rank and potentially with tenure. Formal teaching loads would be limited to about 10 hours a week to permit professors to devote at least half-time to informal counselling of students. Cost advantages from the point of view of both operating and capital expenses would derive from an estimated overall ratio of staff to students of 1:50 and from the possibility of sharing the use of classroom facilities in existing educational institutions throughout Ontario for the regional study centres.

Although elements of the proposal, particularly the concept of course-team development, are similar to the approach of the Open University of the United Kingdom, the needs and circumstances were found to differ greatly between Ontario and the U.K., and what the Study proposed was the creation of a new kind of institution for Ontario, modeled in some respects only on the Open University. Following discussion of this recommendation by the COU/CUA Steering Committee and later by both parent bodies, agreement was reached in late spring this year to set up a new joint subcommittee to study various alternatives for the provision of additional university places, including investigation of the Trotter suggestion as one possible alternative.

The main finding of *Television and Technology* was that technology, understood in the sense of applying the various kinds of hardware available, has not

been fully and effectively used anywhere in the educational system in Ontario because such resources have generally been kept in a compartment and considered separately from other elements in the instructional process — the teacher, student, library and laboratory. More specifically, the Report showed than in its present applications in Ontario universities, the use of television in instruction adds on the average, at least twenty per cent to conventional instruction costs. It could not be assumed that increases in effectiveness were always proportional to the additional expense. The Report included several methods of assessing the costs of using television depending on many variables such as section sizes, production costs, and size of institution. The major conclusion was that substantial savings through the use of television while maintaining quality could be achieved only by inter-university development and sharing of instructional materials. The Report concluded that this kind of cooperation would depend on the willingness of individual instructors and departments to work together.

Recognition of the need for an integrative approach to using educational technology led to a recommendation in the Report that the Ontario Universities' Television Council (OUTC), which was established in 1965 as an affiliate of the Committee of Presidents for advice and assistance in the development and use of television for teaching, should have its terms of reference formally broadened to enable it in general terms to provide technical advice and assistance to the Council, the universities and academic disciplines in respect of various electronic and photographic media, to advise and assist on relationships between universities and the Ontario Educational Communications Authority (OECA) and any regional authorities it establishes, and to maintain liaison with the Learning Media Office set up last year by the Association of Universities and Colleges of Canada. This suggestion is presently under consideration by OUTC and COU.

OUTC has already been active in seeking to promote cooperation between the Ontario universities and OECA through its Channel 19 committee, which was set up in the summer of 1970 with representatives from universities in the central Ontario region served by Channel 19. The committee has provided a forum for discussion of responsibilities, functions and financing for university-level programming on Channel 19, the first of a series of UHF-ETV facilities planned for Ontario. For 1971-72, the first degree credit course to be delivered through Channel 19 has been arranged, Arts 100, Communications, offered by the University of Waterloo. Another regional committee was recently set up for a second UHF-ETV facility, Channel 24, planned to serve the Ottawa area.

With the creation of opportunities for offering university courses through broadcast media, a need has arisen to work out an appropriate set of financial and contractual arrangements between universities, faculty members, and

broadcast authorities for the production and broadcast of educational programmes. During the past year COU has initiated efforts to develop a position on such interrelationships which would serve as a basis for discussions with various parties concerned.

Television and Technology examined the question of appropriate areas of university responsibility for broadcast educational television. While recognizing that individual faculty members are often sought out by broadcasting agencies as prime resource persons for general adult-educational programming, the Report suggested that universities as institutions should concentrate their efforts as much as possible on areas involving degree credit courses, and should accept full responsibility for academic standards of content and presentation in the case of broadcast credit courses. One area of general programming identified in the Report, for which universities share responsibility with government, is that aimed at informing the public at large about the nature of universities, opportunities available, and accessibility. For this purpose, it was recommended that the universities should actively seek to collaborate with educational authorities at all levels, and with public, commercial and educational broadcasting authorities, to devise effective and systematic ways of exploiting radio and television to communicate as widely as possible, and to all age groups, an understanding of what higher education is, what it offers, and that it is a realistic goal for persons with talent, whatever their family or economic circumstances. The series of programmes called "Eye on Academe," begun on Channel 19 during 1970-71 and designed to inform the public generally about universities, provides an example of this type of effort.

The effort of the Ontario universities during the past year to study and respond to the challenge to make use of educational technology in the 1970s provides a solid basis for future work aimed at integrating educational technology fully and effectively into the instructional process.

ONTARIO UNIVERSITIES' APPLICATION CENTRE

The Council of Ontario Universities in June, 1971, approved the establishment of a new agency to be known as the Ontario Universities' Application Centre/Centre de Réception des Demandes d'Admission aux Universités de l'Ontario. This decision was taken following discussion of a report on the needs and design for such a centre, which was prepared by Mr. H. W. Pettipiere, Registrar of the University of Guelph. The Ontario Universities' Council on Admissions (OUCA) had considered the report and recommended to COU that an application centre be set up.

The concept of an application centre is not new to Ontario. As early as 1964

the universities represented at the Committee of Presidents began to study the possibility of setting up an admissions centre. OUCA, which was formed shortly after that time, had recommended at its first meeting the establishment of an application centre. In the United Kingdom an application centre has been operated for the past eight years, although the U.K. system involves a highly structured admissions process quite dissimilar to the design of the Ontario facility.

One reason why a centre was not previously set up in Ontario is that a number of the functions of a centre have otherwise been served under the system of common admission procedures which have operated to assist applicants from Grade 13. These cooperative arrangements, which were evolved over the last few years under OUCA, included the use of a common application form, early admissions procedures, and a system to provide up-to-date information to applicants on university places available, and have contributed much to improving the coordination of admissions practices. However, problems of multiple applications and acceptances have increasingly caused difficulty under existing procedures. It is believed such problems will be eliminated by funnelling applications and acceptances through the Application Centre.

The Application Centre will be managed under the Council of Ontario Universities as a collective venture, and will operate as a service to applicants and universities. Applicants will retain the freedom to state their chosen universities and programmes, and universities will continue to evaluate academic qualifications and to select candidates according to their own admissions criteria. The basic functions of the Centre will be to receive and record applications, decisions taken by universities concerning applicants, and student acceptances of offers of admission. The Centre will also provide a means to put qualified but unplaced Ontario students in touch with universities which have places available, and at the end of the admission period, will be able to advise universities about students not placed so that steps may be taken to accommodate the maximum possible number of qualified applicants. Both during and after the admissions period the Centre will prepare extensive statistics on admissions patterns.

In recent years the need for accurate admissions data as a basis to plan for the development of the system of university education in Ontario has become a matter of much concern for the universities and for government. Since it is the policy of the Government to provide a university place for every qualified Ontario student, the universities must be conscious not only of the demand by their own applicants for admission but also of their situation *vis à vis* the total demand for admission to various universities and programmes in the Province. To date there has been a lack of reliable system admissions data readily available to the universities and government for both short- and long-term planning purposes, and a primary benefit expected from the Ontario Universities' Application

Centre will be to provide such information on a continuing basis each year by having admissions data collected and stored at a central point.

With respect to implementation of the Application Centre, the Minister of University Affairs urged that the Application Centre should be in at least partial operation for the 1972 admissions year. Although this timing called for advancing the schedule originally proposed in the report, after discussions with the Minister COU subsequently agreed to proceed to partial operation for 1972-73 admissions. For this year, the Centre will record information on applications and subsequent decisions by the universities on Grade 13 applicants only. In this first year, the Centre is being funded by a special grant from the Ontario government.

The Centre began operations in August, 1971, with the appointment of Mr. H. W. Pettipiere as Director. A Board of Management has been established under the chairmanship of Mr. M. A. Bider, Registrar of York University. The Board includes representatives of COU, OUCA, the Ontario University Registrars' Association (OURA), the Ontario Department of Education, the Department of Colleges and Universities, and the Ontario Secondary School Headmasters' Council.

ACCESSIBILITY AND STUDENT AID

In April, 1971, the Council received a Report from its Committee on Student Aid, entitled *Accessibility and Student Aid*.[6] The Report was forwarded with the Council's endorsement to the Minister of University Affairs, the Committee on University Affairs, and the Ontario Committee on Student Awards which is responsible for advising the Minister in the area of student aid.

For the Committee on Student Aid, under the chairmanship of Dr. Peter Morand of the University of Ottawa, publication of *Accessibility and Student Aid* was the culmination of more than eighteen months of activity, which included consideration of briefs from each of the provincially assisted universities. The study was undertaken in October, 1969, in a request by the Council to have the Committee on Student Aid review the area of undergraduate student financial assistance and the Ontario Council on Graduate Studies, the graduate area. In the case of the latter, a document entitled *Report to the Ontario Council on Graduate Studies of the Committee on Student Financial Support*[7] was endorsed by the Council in the fall of 1970 and forwarded to government. Both reports

[6] *Accessibility and Student Aid.* (Toronto: Council of Ontario Universities, 1971.)
[7] *Report to the Ontario Council on Graduate Studies of the Committee on Student Financial Support.* (Toronto: Committee of Presidents of Universities of Ontario, 1970.)

carry the Council's support as statements of principles which in its view ought to govern programmes of student financial assistance.

The Report *Accessibility and Student Aid* identifies as fundamental criteria for a student financial aid plan, the capacity to foster *accessibility*, *equity*, and *viability*.

The Report evaluates the accessibility of higher education to various income groups by examining the percentage of students coming from families at different income levels in relation to the percentage of such families in the Ontario population. It is evident, for instance, that university undergraduate programmes are not as accessible for certain income levels as are other post-secondary programmes on average. There has been, however, an apparent improvement in equality of access to higher education in Ontario over the past few years. The Committee on Student Aid found it impossible to say with accuracy what role the Ontario Student Awards Program (OSAP) has played in influencing this trend, but felt that OSAP probably had contributed to the trend, and consequently did not favour a marked change in Ontario's student aid philosophy at this time.

Support is expressed in the Report for the feature of OSAP whereby grant money is provided for students regardless of academic achievement. It is suggested that a conscious objective of OSAP should be to provide this non-repayable assistance to students from lower economic levels who may otherwise not find post-secondary education worth trying.

The Report also points to a number of areas of OSAP considered to need revision. For example, a recommendation is made for a better means test for classifying students as "independent." In some instances the amounts to be contributed by parents of dependent students and the method used to evaluate student summer earnings under OSAP are believed unrealistic. Another recommendation is that part-time students should be able to receive needed assistance, including grants, on a basis comparable to that for full-time students. Other recommendaions made concerning OSAP are to raise the amount of scholarship money students may receive without having it deducted from the grant portion of an award; to change the assessment of resources and course requirements for making awards to foreign students with landed-immigrant status, with no change in the policy of giving no assistance to holders of student visas; and to have the Department of University Affairs review its programme of information to encourage post-secondary education and seek newer, more effective ways to inform students at the various levels, their parents, and the public at large about financial assistance available in the Province of Ontario.

On the much-debated question whether the student and society respectively are paying an appropriate proportion of the costs of post-secondary studies, the Report finds this difficult to resolve because there has nowhere been agreement

on what constitutes an accurate assessment of respective levels of contribution. On the one hand, society may claim such expenses as operating, capital, and special development grants to institutions, awards to students, research grants, and foregone taxes as components of its contribution; on the other hand, students may claim such direct costs as tuition fees and other academic expenses, spending on housing, food, transportation, laundry, medical care, and additions to assets and reductions in liabilities. If, in addition, it is presumed that a student "foregoes" earnings and this amount is seen as part of the cost to the student of his higher education, then the student's proportion of total cost rises accordingly as society's diminishes. For example, on the basis of one estimate that has been made, counting foregone earnings, an Ontario student's share in 1965-66 would have been 55% of the cost of his university education.[8]

Recent interest in alternatives for the financing of higher education has produced a number of research reports on possible student aid models. The Report examines three of these proposals:

(1) The Contingent Repayment Student Assistance Program (CORSAP), proposed by Cook and Stager;
(2) The Council of Ministers' Proposal (Ministerial Memorandum);
(3) The Cook, Clark, Fallis and Kent (CCFK) proposal for an all-grant assistance program.

The first two proposals are seen as essentially variations of the Educational Opportunity Bank (EOB) scheme, and as primarily loan-oriented, although CORSAP does leave open the possibility for in-course grant assistance. While the two schemes do not necessarily assume that a greater percentage of the funding of higher education should be obtained from the private (student) sector than is at present the case, both are usually associated with such a philosophy and would certainly facilitate such a change. Increased costs to the student in the form of higher fees would be a distinct possibility under such proposals, and consequently psychological barriers, such as unwillingness on the part of students to acquire debt, already associated with all-loan ideas, would be greatly magnified if accompanied by any marked increase in fees. For these and other reasons the Report recommends that no student aid programme based on the EOB concept should be introduced in Ontario without further careful study, including satisfactory evidence on the factors influencing accessibility.

More specifically, the Report suggests that, while the CORSAP proposal has made a valuable contribution to the current discussions on student aid and cost distribution in higher education generally, if the scheme were implemented it

[8] *Accessibility and Student Aid*, p. 85, quoted from Cook, Gail A., and Stager, David A. A., Student Financial Assistance Programs (Toronto: Institute for the Quantitative Analysis of Social and Economic Policy, University of Toronto, 1969), Table I.6, p. 19.

would be patterned in such a way as to make students responsible for considerably more of the costs of post-secondary education, even though at the present time there is no convincing evidence that students pay too little of these costs. The proposal of the Council of Ministers of Education was examined, and it was found that it left too many important questions unanswered and that early implementation would be unwarranted in view of the number of such questions. The third proposal studied, the CCFK student-salary proposal, whereby a more stringent means test would be implemented and all awards given would be in grant form, was thought to be an overly costly way to reap the desired benefit of convincing students from lower income groups at an early stage that post-secondary education would be accessible to them.

Of the various student aid schemes discussed in the Report, none (including OSAP as it exists) was found to meet fully the criteria of equity, accessibility, and viability. The least appealing, for a variety of reasons, was that put forward by the Council of Ministers. While the all-grant assistance proposal (CCFK) would greatly improve accessibility to post-secondary institutions of students from disadvantaged backgrounds, the Report questions whether financial support in this form should be made available to all students who have established need regardless of their year or level in post-secondary programmes. As a general principle the Report does favour a contingent repayment basis for loan assistance. Support is also given to setting a level of student fees to reflect an economic assessment of individual and social benefits (but not on the basis of a course-by-course assessment), paying careful attention to the dollar level of any upward adjustment of student fees based on such assessment, but the Report is not in favour of having students absorb the full direct cost of their education.

The Report observes that all-grant assistance is desirable if those who would not otherwise consider post-secondary education are to be placed on an equal footing with those who see post-secondary studies as a distinct or definite option. The concern is that grant money should be used where it would appear to be most effective in facilitating and encouraging the decision to attempt tertiary education, that is, in the earlier years of a course of post-secondary studies. The Report therefore recommends that, in the interest of preserving and fostering equality of access to post-secondary education, and until doubts and concerns about alternative student financial aid programmes are satisfactorily resolved, the Ontario Student Awards Program be altered so as to introduce the following features:

(a) a variable loan-grant ratio to provide for a larger grant portion (up to 100% of a student's direct costs according to need) to students in the first year of post-secondary programmes, with a progressively higher loan portion in subsequent years;

(b) repayment of loan assistance contingent on the borrower's income after graduation;

(c) an additional, supplementary, non-subsidized loan fund with conventional repayment, without formal means testing, but with a provincial guarantee, such loans to be made only on the recommendation of student awards officers to students in financial need who qualify for minimal or no assistance through OSAP.

Shortly after release of the Report, the Government announced a change in the Ontario Student Awards Program for 1971-72 whereby the first $600 of any award would take the form of a repayable loan, with any remainder in the form of a grant. (Previously, the first $150 had been loan, additional amounts to $750 a combination of 60% loan and 40% grant, and any remainder all grant.) This change was directly contrary to the variable loan-grant ratio recommended in the COU Report, and the Council conveyed to the Minister and the Ontario Committee on Student Awards its view that the changed policy for 1971-72 was inconsistent with the principle of accessibility which COU considers fundamental to any programme of student financial assistance.

5.

THE BASES OF SUPPORT

REASSESSMENT OF THE OPERATING GRANTS FORMULA

In 1967-68, formula financing was implemented in the Ontario university system with the main purpose of providing an objective mechanism for determining the share of the total provincial operating grant to be allocated to each university. At that time it was intended that the operating grants formula as designed would provide institutions with a basic income and preserve university autonomy without the close scrutiny of operating budgets implied by a budget review system. In addition, with this formula universities would have a firmer basis for planning.

The present formula is based on a simple pattern of weighted enrolment. Degree programmes are assigned to one of eight categories having different weights. A weight of 1.0 is given to general degree work in undergraduate arts. The other programmes are categorized roughly on a basis of costs relative to the general arts programme. No exact cost relationships are implied, however. Also, non-formula grants are given to the universities for certain special needs not amenable to calculations by formula.

The period during which the formula has been in operation has been characterized by great growth in the university system. The student population increased from 80,489 FTE students (full-time and full-time equivalent of part-time) in 1967-68 to 126,367 in 1970-71. During this period formula operating grants have more than doubled. There is general agreement that the formula, although not without its problems, has provided a notable degree of success as far as overall impact and equity of distribution of funds is concerned. There have been a number of complaints about the weights for various categories and some changes have been made; however, universities have been more satisfied with the distribution of resources by the formula than with that provided by the previous method of budget review.

A decision to conduct a formal review of the operating grants formula was made in the spring of 1971 in response to the Minister of University Affairs' statement to the universities that the level of income unit increase for 1973-74 would not be announced until certain factors contributing to unit costs had been

examined. What other reasons make it desirable to have a reassessment of the operating grants formula? One of the basic tenets of the original formula document was that there should be a review of the formula on a continuing basis, taking into account cost study information as it becomes available and other evidence of significant shifting within the agreed weighted categories. Although little progress has been made in the area of cost studies, there have been a number of requests for changes in the programme weights; for example, Law and Social Work. The weights for students in medicine, dentistry, and veterinary medicine have been modified with such rough cost evidence as could be gathered. Some programmes have changed since the time the formula was introduced, e.g., gradual disappearance of the distinction between general and honours programmes in arts and science. According to present policy the smaller "emerging" universities will soon reach enrolment levels where no extra-formula funds will be provided for emergent support.

The Ontario university system is entering a period of development much different from that of the last five years. Percentage increases in enrolment are much smaller and some institutions are approaching a steady state. It appears as though there will be much stricter limitations on the government financial support available for universities. This is already apparent with the announced increase in the value of the basic income unit for 1972-73 being only 2%, compared with 4.8% for 1971-72. The Minister of University Affairs, in the letter to the university presidents indicating the levels of financial support for 1972-73, stated that he has asked the Committee on University Affairs to study a number of the factors affecting university operating costs, including staff/student ratios, maximum teaching loads, emphasis on research activities, the length of the academic year and the length of given academic programmes.

The review of the formula is meant to provide a wide-ranging look at the whole question of the distribution of operating funds. Not only will the weights for programme categories be assessed, but the important underlying philosophical issues of formula financing will be examined. The impact of the formula as it is presently operating will be more closely monitored.

The Joint Subcommittee on Finance/Operating Grants is acting as the steering committee for the study. The research and staff studies are to be conducted by a working group composed of three members each from the secretariat of COU and the Department of Colleges and Universities.

It is expected that the study will include an examination of the financing methods of one or two other jurisdictions similar to the Ontario university system. This might provide some insight on relative weights assigned to different programmes and the ways in which such weights were determined and substantiated.

The "state of the art" of cost studies is rather inadequate at present. Some benefits for the review might be gained by an analysis of the AUCC cost study,[1] the Thompson-Lapp engineering cost study,[2] and other studies. However, in view of the lack of valid and reliable standards for programme costing, formula weights emanating from this review are not expected to be based on a rigorous programme costing exercise. Instead, some work will be done in the formula review using available data in an attempt to determine the cost sensitivity of certain parameters.

A major portion of the review will concern itself with the basic underlying issues of formula financing. What are the purposes of a formula? The present formula is a tool for generating income for a university and is not meant to be a method for internal allocation of funds within a university. Should the formula, through the weights assigned to various programme categories, reflect government policy concerning the numbers and types of graduates it would like to see produced? There is a general feeling that the formula should not attempt to direct the types of enrolments that universities should have. Rather, steering effects in the formula should be minimized and the government should rely on specific extra-formula regulations to attain its policy objectives.

The income generated under the present formula has provided a *basic operating income* for the universities. Additional funds amounting at the moment to roughly 3% of the formula grants have been allocated at the discretion of the government for special requirements at the universities; e.g., emergent status, bilingualism and special programmes. The formula revision must consider if this practice will continue or whether all government funds should be allocated by formula. Proponents of the view that extra-formula funds should be maintained argue that such additional support is necessary to encourage innovation and quality. Basic operating income, particularly when it is increasing at decreasing rates, may not provide sufficient incentives to a university wishing to embark in a new area or to maintain high standards of academic excellence in particular disciplines. In addition, one formula which attempts to encompass the unique needs of each university might be unnecessarily complex. On the other hand, the distribution of extra-formula grants poses certain problems. What percentage of the total university funds should be allocated in this discretionary manner? What agency should have the responsibility for assessing the needs of each university and for deciding how the

[1] *An Exploratory Cost Analysis of Some Canadian Universities: The Report of the Study of the Costs of University Programmes in Canada* (Ottawa: Association of Universities and Colleges of Canada, 1970).

[2] Ivor Wm. Thompson and Philip A. Lapp: *A Method for Developing Unit Costs in Educational Programs* (Toronto: Committee of Presidents of Universities of Ontario, 1970).

funds should be allocated? In some respects this has the disadvantages of a budget review process.

The idea of excluding certain university functions from the formula is a possibility for examination. The removal of, for example, library operations, computing facilities, or research overhead from the formula and having them funded separately might enable the formula to provide a more equitable distribution of basic operating income. In this way, the formula would avoid the areas where there are large costs not directly connected with the student enrolment at a university. This approach has many drawbacks as well. It would be difficult to decide how much these activities really cost and how to separate them from basic operating funds. Also, the levels to which they would be supported outside the formula would result from subjective decisions.

The relationship of fees to formula income, the method of determination of standard fees, and the question of fee levels will form part of the review. There is a serious question whether or not student fees should be included in the calculation of the formula operating grant. The grant now is calculated as the product of weighted enrolment and the dollar value of the basic income unit minus the standard fees. A standard fee for each programme is set at the median fee charged by the universities offering that programme. This method of determining the standard fee has proven cumbersome and inadequate. One university which has an actual fee lower than the median can raise the standard fee and thereby adversely affect the income of other universities simply by raising its own fee higher than the existing standard fee. Clearly this scheme requires further consideration and possible revisions.

The first step in the review has been a series of informal meetings between members of the working group and representatives of each of the universities to learn their feelings about the present formula, their concerns for a formula revision, and their suggested methods of approach to the study. It is felt that a series of consultations with the universities on the important questions of formula review is a more fruitful approach than requesting a formal submission from each institution. A number of position papers on the key issues raised during the meetings are to be produced as a basis for further discussions with the universities. An interim report outlining the main issues, the scope of the study, and the methodology to be used will be made available in December, 1971. The study itself will take place in the following six months with a draft report outlining the results and recommendations scheduled for July, 1972. A final report on the study incorporating any feedback of the results and recommendations will be produced in October, 1972. This will allow sufficient time for the revised formula to be implemented for the 1973-74 fiscal year. It is probable that a change in the formula will cause a different distribution of funds with some universities being affected adversely. It is recognized that any significant

redistributions would have to be phased in over a number of years to avoid placing in difficult financial positions those universities adversely affected by the changes.

FINANCIAL MANAGEMENT, REPORTING AND COST STUDIES

At a time when the Ontario universities are entering a period of imposed financial constraint, the need for improved financial management and planning is obvious. Coupled with this is the ever-growing demand by government and the taxpayers for improved financial accountability by universities. Since its inception in 1970, the Committee of Finance Officers — Universities of Ontario (COFO-UO), an affiliate of COU, has embarked on a programme aimed at improving the standards and comparability of university financial reporting and developing methods of upgrading financial planning and management techniques.

For the last decade, the main source of financial information on Canadian universities has been the Dominion Bureau of Statistics — Canadian Association of University Business Officers Report on Financial Statistics of Universities and Colleges. The reliability of this information and the comparability of the data between institutions have been open to question. The main reasons for this seem to lie in the broad definitions on the DBS-CAUBO reporting form and the wide variation in accounting practices at various institutions. For similar reasons the additional financial information collected by the Department of University Affairs has been less than adequate.

Task Force 'A' of COFO-UO, comprised of seven senior finance officers, was given a mandate to improve definitions and to design a more meaningful reporting format for use in the short term. As a first step, the task force produced in the fall of 1970 a trial reporting form on operating expenditures. The main purposes of this form, a matrix which contains financial data by function and object of expenditure, were to provide the Research Division of COU with necessary information and to create a base for further improvement of university financial reporting.

In the first three months of the year, a survey of the universities was undertaken by a staff member of the Research Division of COU to obtain feedback on the use of this form. Specifically, the discussions with the universities centred around difficulties experienced in completing the forms, changes or additional information that would be useful, and insight into the components of the categories and some of the accounting practices at the universities. The survey indicated that a great deal of work was necessary to make the definitions and guidelines more precise. There was some improper classification of information

because of misinterpretation of definitions, forms design, and incompatibilities between accounting practices. Task Force A studied the problems raised during the survey in an attempt to sort out the variances among universities. The format of the report (by object and function) was maintained, but the forms were expanded to cover total revenue and expenses of each university irrespective of the sources of funds. Definitions were improved and additional guidelines were added. The new forms were subjected to a test at the universities represented on the Task Force. Only a few minor changes were necessary and in July, 1971, the reporting form was approved by COU.

The efforts of Task Force A during the past year were not meant to infringe on the autonomy of an individual university concerning its accounting practices. However, it became very clear during the work that one of the main impediments to standardized financial reporting is the variety of accounting practices in the system.

The importance of liaison with government and other groups interested in uniform financial information cannot be overstressed. Task Force A kept in close contact at all stages with the Director of Finance of the Department of University Affairs. As a result, the Director showed a willingness to recommend adoption of the new reporting forms as the official government form for requesting financial information from universities.

A great deal of interest has been generated in the idea of a national system of uniform financial reporting. Because of this development, Task Force A felt that it should share its experience with those working in the same area. The Dominion Bureau of Statistics' financial reporting project with the universities of the Atlantic provinces and the Inter-Provincial Committee on University Rationalization study of university financial reporting in the prairie provinces were monitored continuously. Representatives of these projects were kept informed of the COFO-UO study. In addition, a presentation of the Ontario work was made to the CAUBO Research Committee.

Although a great deal of progress has been made by Task Force A, many barriers still exist on the road to uniform financial reporting. The degree of centralization of certain functions within a university generally dictates how easily that institution can calculate costs by function. Also, there still remains the monumental problem of differing accounting principles and practices. These are areas which Task Force A will consider in the coming year.

In the last year, cost studies have been a subject for major discussion with the publication of the long-awaited AUCC cost study,[3] the Thompson-Lapp *Method for Developing Unit Costs in Educational Programs*,[4] and the report

[3]See Footnote 1.
[4]See Footnote 2.

on the requirements for the formula financing of education programmes in Ontario universities.[5]

Task Force B of COFO-UO has as its terms of reference "to consider the scope and method of future studies on costing, Programme Planning and Budgeting Systems, and financial information systems" and "to recommend to the Executive Committee for approval those studies which in their view should be undertaken". In its first meetings, Task Force B has attempted to place programme planning and budgeting systems, costing, and management information systems in their proper context and to determine some of their interrelationships. The group has set up preliminary contacts with other universities, such as Ohio State and Syracuse, in order to obtain first-hand working knowledge of the techniques of programme planning and budgeting systems and costing that these universities have undertaken. In addition, the work of the Western Interstate Commission for Higher Education is being monitored and its applicability to the Ontario system is being examined. As yet, the Task Force has not recommended any studies. However, it is expected that a feasibility study of programme costing will be one of the first recommended. Financial information being collected through the new reporting format of Task Force A will supply the major inputs to any longer range planning studies.

The Committee of Finance Officers has played a major role in a number of financial developments in the university system. COFO-UO was involved in the considerations of the government's decision to change the provincial grant year-end in 1971-72 to April 30 and the proposal that universities change their fiscal year to coincide with this change in grant year. With the Finance Branch of DUA, COFO-UO negotiated the level of support to be given in the special ten-month transition year. Two finance officers have been assigned to work jointly with the Office of Computer Coordination to study the implementation of its report on computer charging. In addition, at the request of DUA, three COFO-UO members participated in discussions with DUA officials and representatives of the Federal government on matters pertaining to a review of the Federal-Provincial Fiscal Arrangements Act, 1967.

TEACHER EDUCATION ON FORMULA

The Fourth Annual Review reported on the progress of integration of teachers' colleges into the Ontario universities in 1969-70. That year saw the signing of several agreements between teachers' colleges and the adjacent uni-

[5]*Financing University Programs in Education* (Toronto: Committee on University Affairs and Committee of Presidents of Universities of Ontario, 1971).

versities. At present seven Ontario universities are offering programmes in teacher education. During the transition phase all operating and capital funds were provided through the Department of University Affairs on a budget review basis. However it was recognized that one very important aspect in the development of teacher education programmes would be the establishment of appropriate patterns for financing and particularly the incorporation of these programmes into the present formula financing system. It had been the aim of the Joint Subcommittee on Finance/Operating Grants to introduce teacher education programmes into the operating grants formula for the 1970-71 fiscal year. Several delays caused postponement of further research in this area and the budget review cycle was repeated for another year.

In August, 1970, the Joint Subcommittee established a special study group under the co-chairmanship of Mr. B. L. Hansen, Director of Research for COU, and Mr. J. S. Bancroft, Director of Finance for the Department of University Affairs. The special study group included staff members from the Research Division of COU, the Finance Branch of the Department of University Affairs, and the Department of Education. The Joint Subcommittee also established an advisory group composed of representatives from the field of teacher education to review and advise periodically on the work-in-progress of the special study group. Thus the mechanism for drafting recommendations on the required financing arrangements was created.

It is important to note that the scope of the study did not extend to a questioning of how teacher education should be provided or to an inquiry of what facilities would be necessary. Rather, the single aim of the study was to investigate what long-term financing arrangements would be necessary to support adequately the goals of teacher education programmes and particularly how these programmes should be incorporated within the framework of the present operating grants formula.

Data on enrolment, course offerings, staff, salaries, and budgets were collected for three possible states: actual (1970-71), desirable (1970-71), and steady-state (at date anticipated). The universities also participated in an exercise in mathematical modelling with the purpose of indicating what formula weights would be required to support teacher education programmes at their present level of enrolment and curriculum development and also at the steady-state level as determined by each institution. The results of this exercise indicated a range of formula weights of 1.0 to 3.5, reflecting the size and development of the various institutions and the range of their programme and course offerings. Mathematical modelling was also used at the system level to give some indication of what formula weight might be required under differing assumptions on average faculty budget per full-time equivalent staff member, yearly hours of instruction per student, faculty workload and section size.

The study group also met with representatives of the various institutions involved in teacher education to discuss the data to be collected, goals of the institution, and adequate levels of financing. Several members of the study group also visited the province of Alberta and the state of Illinois to investigate their methods of financing teacher education. The final recommendations were found to be consistent with the patterns of financing provided in these two jurisdictions.

The final report contained 14 recommendations to cover all aspects of formula financing including basic support for undergraduate and graduate programmes, appropriate weights for the consecutive and concurrent forms of programme, financing the first year following integration of a teachers' college programme with a university, summer courses, protection against the financial effects of small enrolments and significant declines in enrolment, research and development, and the introduction of new graduate programmes in teacher education.

The final recommendations were referred to the Joint Subcommittee on Finance/Operating Grants, which approved them with minor alterations. The report was approved in principle at a joint meeting of CUA/COU in December, 1970, and accepted by the Minister of University Affairs on a provisional basis. The recommendations are to be applied in arriving at grant decisions commencing in 1971-72, though universities will still have the right of appeal through the Joint Subcommittee.

Under the new arrangements, financial requirements for the first full year of operating a teachers' college after integration will be determined on a budget-review basis. After this first year, elementary teacher-education programmes will be phased in over a five-year period at formula weights 1.5, 1.6, 1.75, 1.9, and 2.0, except in special circumstances which warrant a weight higher than 1.5 (but less than 2) in the earlier years. Formula entitlements in the case of summer programmes in education will be calculated on the basis of the total number of students adjusted by a part-time factor.

For graduate programmes in education the relevant formula weights at the master's level will be 3 and at the doctoral level, 6.

The Report also recommends setting up a joint body representing the interests of universities and government to provide a forum for discussion of their respective policies and plans for teacher education in Ontario.

The Joint Subcommittee's Report has been commended as a useful and successful joint undertaking. Because the results of the Report were tied closely to a detailed cost study undertaken for the Joint Subcommittee, the assignment of formula weights for teacher-education programmes is considered to be more precise than for other areas brought under the operating grants formula since its inception. Because of the interest generated by the report it was published in

March, 1971, under the title *Financing University Programs in Education.*[6]

Further work remains to be done in several areas. The Report recommended that formula financing not be applied to "special education" programmes, a highly specialized field of study not yet offered in Ontario. Further investigation will be needed to determine appropriate financing arrangements. The area of capital support for teacher education programmes was not dealt with in the Report. Comments made by university representatives during the study have been referred to the Joint Capital Studies Committee, which is currently attempting to develop appropriate weights for inclusion of teacher education space in a capital formula.

It became apparent during the study that the development of graduate programmes in education required further attention. The Report recommended that development of new graduate programmes in education and extension of existing programmes should await results of a study directed to need. The field of education has now been given priority in the series of discipline assessments being initiated by the Advisory Committee on Academic Planning.

CAPITAL FINANCING

Throughout 1971 work progressed on the development of a proposal for a capital formula in response to a directive from the Joint Capital Studies Committee that they would consider alternative patterns for determining and allocating capital funds. Also, since Taylor, Lieberfeld and Heldman have yet to table their final recommendations to the Joint Capital Studies Committee, the Committee on University Affairs recommended that the interim capital formula should be applied for at least another year. For the next year, however, it is anticipated that health science and education programmes will be financed under the interim capital formula whereas previously their programmes were funded from other sources.

In order to respond to this action and to continue work on the development of a capital formula the Committee on Capital Financing, with the approval of COU, established four task forces during the summer of 1971. A capital formula usually consists of two parts: one to determine the space required and the other to apply a dollar multiplier. The Task Force (Space and Utilization) under the chairmanship of Mr. Laurence G. Macpherson, formerly Vice-Principal (Finance) at Queen's University, has been assigned the task of developing the overall proposal for the capital formula including both the form of the formula and the appropriate space and utilization parameters. Five universities were selected to nominate representatives to the task force and to advise on and test

[6] *Ibid.*

space and utilization parameters. Representation was limited to five universities in order to keep the working group to a manageable size. However, the five universities were carefully selected to reflect the many differences between the Ontario universities including size, part-time enrolment, research commitment, number of programmes, undergraduate/graduate mix (12 variables in all were considered).

The task force has met every two weeks, on the average, since mid-July and expects to continue the pace until a final report is tabled before the Committee on Capital Financing. A methodology has been established and data collected from the five universities. The data are currently being tabulated and subsequently will be compared to data from other jurisdictions to enable members of the task force to make informed judgements of what are appropriate space and utilization standards. The final outputs of the task force should prove useful not only for the development of a capital formula but also to all fourteen universities in the provision of guidelines for space allocation and forecasts of needed facilities.

It was anticipated that the work of this task force would be completed by the end of 1971. However, Taylor, Lieberfeld and Heldman (TLH) recently released a preliminary draft of their report. The Committee on Capital Financing has requested the task force to comment on the report and include in their final report a commentary on the TLH study. In order to accomplish this the Committee on Capital Financing has asked COU to extend the reporting date of this task force to at least May, 1972.

As indicated earlier, space and utilization parameters comprise only one part of a capital formula, albeit a very important one. A second task force, concerned with Building Costs, was established to develop a proposal for a cost multiplier and also to comment on past university construction. This task force will also try to seek answers to the questions, "given that there are differences in cost between university and non-university buildings, why do these differences exist and are the differences justified?" Criteria for the selection of a chairman for this task force included objectivity and experience in both university and commercial construction.

On June 7, 1971, the Committee on Capital Financing hosted a seminar on the possible application of a systems approach to university building in Ontario. The seminar was conducted by Mr. Christopher Arnold, Vice-President of Building Systems Development, consultants for the Academic Building Systems (ABS) project. One major segment of the project, initiated by the states of California and Indiana, involved a comparative cost study of six selected buildings. This part of the ABS project closely paralleled the study the Ontario universities were about to undertake. For this reason Mr. Arnold was invited to accept the position of Commissioner on a task force with terms of reference

which included a detailed study of university construction. Three members of the Ontario Association of Physical Plant and Planning Administrators (OAPPPA), a representative of the Committee on Capital Financing, and the Chairman of the Committee on Capital Financing complete the membership of this task force.

From a list of university buildings tendered within the last five years and costing over $1,000,000, six projects were selected for detailed study; three of these projects were considered to be heavily serviced buildings and the other three lightly serviced. These buildings also represented an average, a high and a low cost project in each category. The firm of quantity surveyors, Hanscomb Roy Associates, has been contracted to do the detailed costing of the selected projects. For comparative purposes six non-university buildings will also be selected from a list of possible candidates for detailed study.

By studying the details of these twelve buildings the task force will seek to determine whether there are differences in cost between university construction and buildings in the private sector and why differences in cost occur between types of buildings. The results from this task force will then be used as input to a planned second phase which will question whether or not the cost differences are justified.

The other two task forces, with the formal titles Task Force (Education-Capital) and Task Force (Health Sciences-Capital) have been assigned the primary tasks of recommending specific weights for education and health science programmes in the interim capital formula. They also have secondary tasks of advising the Task Force (Space and Utilization) on appropriate space standards and utilization rates for health science and education programmes. Dr. G. R. Love, Chairman of the Committee on Capital Financing, is also acting as chairman of the Task Force (Education-Capital). Other members include representatives of each college or faculty of education and the attendant university and two representatives of the Committee on Capital Financing. This task force is expected to report before the end of 1971.

The Task Force (Health Sciences-Capital) is chaired by Dr. F. R. Chalke, Faculty of Medicine, University of Ottawa. The health science administrators were asked to select persons who would be willing to serve on the task force and these representatives, again with two representatives from the Committee on Capital Financing, comprise the membership of the task force. Because this task force has just commenced its work, it is difficult to anticipate at this time when a final report may be expected.

APPENDIX A

MEMBERS OF THE COUNCIL OF ONTARIO UNIVERSITIES OBSERVERS AND SECRETARIAT

at November 1, 1971

MEMBERS

Brock University	— A. J. Earp, Acting President
	B. W. Thompson, Department of Geography
Carleton University	— A. D. Dunton, President*
	J. M. Holmes, Department of Chemistry
University of Guelph	— W. C. Winegard, President
	E. P. Benson, Department of English Language and Literature
Lakehead University	— W. G. Tamblyn, President*
	J. Mothersill, Department of Geology
Laurentian University	— R. J. A. Cloutier, Acting President
	D. H. Williamson, Department of Geology*
McMaster University	— H. G. Thode, President (Vice-Chairman)*
	R. C. McIvor, Department of Economics
Université d'Ottawa	— R. Guindon, Recteur
	M. Patry, Faculty of Social Sciences
Queen's University at Kingston	— J. J. Deutsch, Principal*
	M. Sayer, Department of Physics
University of Toronto	— J. H. Sword, Acting President*
	K. Yates, Department of Chemistry
Trent University	— T. H. B. Symons, President
	S. T. Robson, Department of History
University of Waterloo	— B. C. Matthews, President
	J. C. Gray, Department of English
University of Western Ontario	— D. C. Williams, President (Chairman)*
	F. A. Forsyth, Department of Physics
University of Windsor	— J. F. Leddy, President*
	L. Smedick, Department of English
York University	— D. W. Slater, President
	H. Adelman, Department of Philosophy, Atkinson College

OBSERVERS

Ontario Institute for Studies in Education	— R. W. B. Jackson, Director
Royal Military College of Canada	— W. K. Lye, Commandant
Waterloo Lutheran University	— F. C. Peters, President

SECRETARIAT

J. B. Macdonald, Executive Director*
G. G. Clarke, Secretary and Research Associate
J. Butcher, Assistant Secretary

Research Division
B. L. Hansen, Director of Research
S. Cale, Administrative Assistant
T. Da Silva, Research Associate (Manpower and special studies)
J. E. Long, Systems Manager
J. J. Long, Systems Analyst
R. McDougall, Research Associate (Financial Studies)
L. Payton, Research Associate (Admissions and student studies)
I. W. Thompson, Research Associate (Capital studies)

Office of Computer Coordination
M. P. Brown, Director
N. Housley, Network Systems Engineer
R. S. Kado, Research Associate
A. J. Kowaliw, Network Systems Engineer

Office of Library Coordination
C. D. Cook, Director

Advisory Committee on Academic Planning
M. A. Preston, Executive Vice-Chairman

Ontario Universities' Application Centre
H. W. Pettipiere, Director
G. S. Arthurs, Assistant Director

*Member of the Executive Committee

APPENDIX B

CONSTITUTION

Council of Ontario Universities
Conseil des Universités de l'Ontario

(This body was formed on December 3, 1962, with the original name of the "Committee of Presidents of Provincially Assisted Universitites and Colleges of Ontario." A formal constitution was first adopted on December 9, 1966, under the name "Committee of Presidents of Universities of Ontario / Comité des Présidents d'Université de l'Ontario." The constitution was amended on January 18, 1968; April 26, 1968; March 13, 1970; and April 16, 1971. On the latter date, the name of the body was changed to its present one, effective May 1, 1971.)

1. *Name*
   (1) The name of this body shall be: "Council of Ontario Universities / Conseil des Universités de l'Ontario."

2. *Objects*
   (1) The objects of the Council are to promote cooperation among the provincially assisted universities of Ontario, and between them and the Government of the Province, and, generally, to work for the improvement of higher education for the people of Ontario.

3. *Membership*
   (1) Those eligible for membership are (a) the executive heads of provincially assisted universities in Ontario which grant university degrees (a power conferred by a legislative or parliamentary act or charter in which such authority is specifically stated) but excluding institutions whose power to grant degrees is limited to a single professional field; and (b) one colleague, elected to membership by the senior academic body of each such institution.
   (2) Colleagues elected to membership by the senior academic body of those institutions defined in article 3, section (1), part (a), shall hold office for a term of one year, renewable.
   (3) At the time of the coming into force of this amendment on May 1, 1971, members shall be the executive heads and elected colleagues of the universities as defined in article 3, section (1), part (a) and listed in Annex A attached.
   (4) Members from other institutions which become eligible to provide members may be admitted if recommended by the Executive Committee and approved by a two-thirds majority of the members present and voting at a meeting of the Council.

4. *Officers*
   (1) The Council shall have a Chairman, elected from and by its members for a term of two years. He shall serve without remuneration.
   (2) The Council shall have a Vice-Chairman, elected from and by its members for a term of two years. He shall act for the Chairman in the absence of the latter. He, too, shall serve without remuneration.
   (3) The Council shall have as its senior paid officer an Executive Director, appointed by the Executive Committee with the concurrence of not less than two-thirds of the members of the Council. Included in his functions shall be those of secretary and treasurer of the Council.

(4) The Council may have other paid officers, and sub-staff, as deemed necessary by the Executive.

5. *Committees*

(1) There shall be a committee called "the Executive" composed of eight members: the Chairman of the Council (who shall preside), the Vice-Chairman, the Executive Director (who shall have no vote), the immediate past Chairman (ex officio), and four others. The membership of eight shall include at least one from the University of Toronto, one from among the emergent universities* and four from the intermediate-sized universities. Its function is to guide the Council and, on occasion, to act for it between meetings of the Council.

(2) There shall be a "Committee on Nominations," named by the Chairman with the approval of the Executive. It shall propose candidates for the elective offices and for membership of the Executive. It may also, from time to time, nominate members of other committees, and shall review committee membership and terms of reference as provided for by subsection (5) below.

(3) There may be such other committees (standing and special) as are deemed necessary.

(4) Members of standing committees shall serve for terms of not more than two years. They may be reappointed. Members of a special committee normally will serve for the duration of the committee.

(5) At least once every two years, normally after the election of officers and the naming of a new Executive, the Committee on Nominations shall review the terms of reference and membership of committees of the Council and suggest to the Executive such changes as may seem desirable.

6. *Affiliates*

(1) Other organizations or associations of personnel serving in the universities of Ontario may be affiliated to the Council.

(2) Such bodies may be established by the Council or may come into being on the initiative of others.

(3) Normally an affiliate would have some executive power delegated to it, explicitly or implicitly, by the Council.

(4) Affiliates shall be responsible to the Council with respect to those of their interests and functions which fall within the scope of the activities of the Council.

7. *Meetings*

(1) The Council shall meet at least twice a year.

(2) Meetings of the Council and of the Executive may be called by the Chairman, the Vice-Chairman, the Executive Director, or any three other members of the Council.

(3) A member who is the executive head of an institution and is unable to attend a meeting of the Council may be represented at the meeting by an alternate of his choosing. A member who is an elected colleague who is unable to attend a meeting of the Council may be represented by an alternate selected by the senior academic body of the institution he represents. Alternates shall have the power to vote at the meeting.

(4) Committees will meet as required.

(5) A majority of the members of the Council or of a committee shall constitute a quorum for the meeting of the Council or committee concerned.

*See Annex A.

8. *Finance*

(1) The fiscal year of the Council shall end June 30.

(2) The chief source of financial support of the Council shall be subscriptions paid by the universities whose executive heads are members of the Council.

(3) The scale of membership subscriptions shall be set by action of the Council.

(4) The Council may receive additional financial support from other sources.

(5) The accounts of the Council shall be audited by a firm of auditors appointed by authority of the Council for terms of one year, renewable.

9. *Amendment*

(1) This constitution may be amended by a two-thirds majority of members of the Council present and voting at a meeting in the notice of which the proposed amendment is specified and at which at least two-thirds of the members are present.

10. *Dissolution*

(1) The Council may be dissolved by a two-thirds majority of members of the Council present and voting at a meeting in the notice of which the motion for dissolution is specified and at which at least two-thirds of the members are present.

(2) In the event of dissolution of the Council, all assets and property of the Council shall, after payment of its just debts and obligations, be distributed to one or more charitable organizations in Canada, as may be determined by the Council.

ANNEX A

Provincially assisted universities of Ontario whose executive heads and colleagues were members of the Council of Ontario Universities at May 1, 1971:

Brock University*
Carleton University
University of Guelph
Lakehead University*
Laurentian University of Sudbury*
McMaster University
Université d'Ottawa
Queen's University at Kingston
University of Toronto
Trent University*
University of Waterloo
University of Western Ontario
University of Windsor
York University

*Universities defined as emergent at May 1, 1971.

APPENDIX C

COMMITTEES, BOARDS AND AFFILIATES OF THE COUNCIL OF ONTARIO UNIVERSITIES

at November 1, 1971

COMMITTEES

Standing Committees

1. *Executive Committee*

   Task: To guide the Council of Ontario Universities and on occasion to act for it between meetings of the Council.
   Membership: Eight members: The Chairman of the Council (who shall preside), the Vice-Chairman, the Executive Director (who shall have no vote), the immediate past Chairman (ex officio), and four others. The membership of eight shall include at least one from the University of Toronto, one from among the emergent universities, and four from the intermediate-sized universities.
   Chairman: Dr. D. C. Williams, President, University of Western Ontario.

2. *Committee on Nominations*

   Task: To propose candidates for elective offices and for membership of committees.
   Membership: Members shall be named by the Chairman of COU.
   Chairman: Dr. A. D. Dunton, President, Carleton University.

3. *Committee on Research and Planning*

   Task: (a) To suggest to the Council of Ontario Universities research and planning projects which should be undertaken for the development and improvement of higher education in Ontario; (b) at the request of the Council to delineate research and planning projects of this sort and suggest procedures and personnel for carrying them out; (c) to review and comment on the results of such projects for the guidance of COU.
   Membership: Ten or a dozen persons representing university administration and a variety of academic disciplines — persons with experience of social research and an interest in the Committee's task.
   Chairman: Dr. Robin S. Harris, Professor of Higher Education, University of Toronto.

4. *Committee on Operating Grants*

   Task: (a) To study matters pertaining to the Provincial Government operating grants system and to make recommendations on these matters to COU; (b) to maintain liaison with the relevant subcommittee of the Committee on University Affairs.
   Membership: Seven members including at least one from a large university, one from a university of intermediate size, and one from a small university.
   Chairman: Dr. J. H. Sword, Acting President, University of Toronto.

5. *Committee on Capital Financing*

   Task: (a) To study the problems presented by the planning, construction and financing of university buildings, and to make recommendations on these matters to the Council of Ontario Universities; (b) to maintain liaison with the organization of campus planners and physical plant administrators of Ontario universities; (c) to maintain liaison with appropriate officials of the Department of Colleges and Universities.

Membership: About half-a-dozen persons representing large and small universities and the administrative functions of campus planning and campus financing.
Chairman: Dr. G. R. Love, Department of Physics, and Director of Planning, Carleton University.

6. *Committee on Student Aid*

Task: (a) To study the problems relating to the provision and administration of financial aid to university students in Ontario, and to make recommendations on these matters to COU; (b) to maintain liaison with appropriate officials of the Department of Colleges and Universities.
Membership: About seven or eight persons — some experienced in the formation of policy for, and some in the administration of, university student aid programmes.
Chairman: Dr. Peter Morand, Department of Chemistry, University of Ottawa.

7. *Committee on Information*

Task: (a) To suggest to the Council of Ontario Universities ways in which the nature, the roles, the problems and the actions of the universities can be interpreted to the public; (b) to advise the Council on relations with the press and other media of communication; and (c) as requested by the Council from time to time to arrange for news releases.
Membership: Seven or eight persons, including a preponderance of university information or public relations officers, but also representatives of general university administration and of persons oriented primarily towards the philosophy and politics of higher education.
Chairman: Dr. D. C. Williams, President, University of Western Ontario.

8. *Committee on Computer Services*

Task: (a) To provide a medium of communication among the directors of computing facilities in Ontario universities; (b) to advise the Board for Computer Coordination on matters concerning coordination and cooperation in the development and use of university computer services; (c) to assist the Office of Computer Coordination in the implementation of approved policies and programmes; (d) to be responsible to COU and to respond to requests from COU for advice and assistance.
Membership: A representative of each of the Ontario universities with computer needs or installations, with power to add.
Chairman: Mr. George Lake, Director, Computing Centre, University of Western Ontario.

9. *Committee on Student Housing*

Task: (a) Generally, to study problems in the provision and operation of student residences and make recommendations to the Council of Ontario Universities; (b) more particularly, to establish space/cost standards and area factors, and to determine to what extent the construction of student housing requires subsidization; (c) to give direction to the study and consideration of the various possible methods of contracting for residence design and construction which might prove to be economical and acceptable to the universities; (d) to maintain liaison with other appropriate committees of COU, notably the Committee on Capital Financing, and with appropriate representatives of the Committee on University Affairs and the Ontario Student Housing Corporation.
Membership: Six to eight persons representing a variety of interests in student housing, including at least one from a large university, one from a university of intermediate size, one from a small university, and one student member.
Chairman: Mr. W. W. Small, Vice-President (Administration), York University.

10. *Pension Board for COU*

Task: (a) advise the employer on the proportion of administration expenses to be borne by the employer; (b) consider applications from members of the Plan to have their pensions payable in some manner other than that prescribed; (c) purchase annuities for retiring members; (d) determine whether a member has become totally and permanently disabled, and to select the type of benefit to be paid to such persons; (e) advise the employer on transfer of a member's credits to another registered fund or plan; (f) notify the trustee of the proportion of employer and employee contributions to be invested in equity funds and the proportion in fixed-income funds, as elected by the member; (g) provide a written explanation to each member of the terms and conditions of the plan and of his rights and duties thereunder; (h) appoint an actuary; (i) decide on the distribution of the assets of the fund in the event of discontinuance of the Plan; (j) to review the Plan once a year and to advise COU whether any improvements are desirable and feasible.
Membership: Three persons.
Chairman: Dr. W. C. Winegard, President, University of Guelph.

11. *Advisory Committee on Academic Planning* (a Committee of the Ontario Council on Graduate Studies)

Task: (a) To assist the discipline groups in promoting the rationalization of graduate studies within the universities; (b) to advise OCGS on steps to be taken to implement effective provincial planning of graduate development; (c) to recommend, through OCGS, to COU the carrying out of planning assessments of disciplines or discipline groups and to recommend suitable arrangements and procedures for each assessment; (d) to supervise the conduct of each planning assessment approved by COU; (e) to respond to requests by COU to have a discipline assessment conducted by proposing suitable arrangements; (f) to submit to COU the reports of the assessments together with any recommendations which the Committee wishes to make.
Membership: (a) The Committee shall consist of at least seven members of the professoriate in Ontario universities, some of whom shall be members of OCGS; (b) the members of the Committee shall serve for such periods of time as OCGS may determine, and they shall be selected in such manner as may provide for reasonable balance both of academic disciplines and of universities; (c) the members of the Committee shall be appointed as individuals.
Chairman: Dean H. S. Armstrong, School of Graduate Studies, University of Guelph.

Standing Joint Committees

1. *COU/Department of Education Liaison Committee*

Task: To review changes in policy, curriculum, and admission involving the high schools or universities and to keep the Department of Education and the universities advised of changes.
Membership: Membership will comprise three officers of the Department of Education and three representatives of the Council of Ontario Universities.
Chairman: Dean A. D. Allen, Faculty of Arts and Science, University of Toronto.

2. *COU/Committee of Presidents of CAATs Joint Committee on Cooperation Between Universities and Colleges of Applied Arts and Technology*

Task: (a) To determine major areas of joint concern and an appropriate order of priority among these, and to recommend the kinds of machinery required for joint effort; (b) to consider those areas of mutual concern identified at the May 16, 1969,

joint meetings of CPUO and the Committee of Presidents of CAATs, particularly the following: — admission policies and procedures and the implications of changes in the secondary-school system — accreditation and recognition of professional organizations — resource-sharing, e.g. in such areas as libraries and computers, and the allocation of programmes between the CAATs and universities — cooperation of COU and the Committee of Presidents of CAATs in the preparation of inputs to the Commission on Post-Secondary Education in Ontario.
Membership: Eight members, four members appointed by each parent Committee and one representative from each group to serve as co-chairman.
Co-Chairmen: Dr. J. A. Gibson, President, Brock University and Dr. W. G. Bowen, President, Niagara College of Applied Arts and Technology.

3. *COU/CUA Joint Subcommittee on Graduate Studies*
Task: To consider the problems associated with long-term orderly development of Graduate education in the Province and to advise COU and CUA.
Membership: Four members from each of COU and CUA.
Co-Chairmen: Dr. D. T. Wright, Chairman, CUA, and Dr. D. C. Williams, Chairman, COU.

4. *COU/CUA Joint Capital Studies Committee*
Task: (a) To carry out an enrolment study, first based on the enrolment projections of the individual universities and, at a later date, modified in the light of projections that should come out of the deliberations of the "Commission on Post-Secondary Education"; (b) to develop an information system, essentially a perpetual inventory system, that will facilitate the analysis of the space available at Ontario universities, the space projected, and the use of such space in view of the needs of the university; (c) to develop standards of space utilization that would be acceptable to the universities and government authorities based on the analysis provided in (b) and reflecting also experiences and findings in other jurisdictions.
Membership: Three members appointed by each Committee.
Co-Chairmen: Prof. G. R. Love, Dept. of Physics and Director of Planning, Carleton University (for COU) and Dr. D. T. Wright, Chairman, CUA.

5. *COU/CUA Joint Subcommittee on Finance*
Task: To consider matters relating to the operating grants formula and the operating finances of the universities.
Membership: Three members from each of COU and CUA.
Co-Chairmen: Dr. J. H. Sword, President, University of Toronto, and Dr. D. T. Wright, Chairman, CUA.

Special Committees

1. *Special Committee to Review Agreements Respecting Colleges of Education*
Task: To review the existing agreements between the Minister of Education and the three universities with colleges of education and to make recommendations to the Council of Ontario Universities for amendments to bring these agreements into conformity with the guidelines for the integration of teachers' colleges into universities.
Membership: The dean of a college of education, two deans of arts and science, and an academic.
Chairman: Reverend N. J. Ruth, Faculty of Arts and Science, University of Windsor.

2. *Special Committee on University Interests in Educational Media*

Task: To draft a position paper setting forth principles which might govern faculty members' participation in educational television from the standpoint of protecting the proper interests of the universities.

Membership: Four members chosen by Executive Committee of COU.

Chairman: Mr. L. D. Todgham, Director, Instructional Media Centre, University of Toronto.

Special Joint Committees

1. *COU/OCUFA Joint Pension Committee*

Task: To study the feasibility of establishing a common pension plan for all Ontario Universities.

Membership: Six persons, three nominated by each of the two sponsoring organizations.

Co-Chairmen: Mr. P. J. Lewis, Assistant to the Comptroller, Trent University (for COU) and Prof. D. M. Winch, Chairman, Dept. of Economics, McMaster University.

2. *COU/OCUFA Joint Committee on Academic Salaries*

Task: (a) To review available data bearing on recommendations concerning salary increases for 1970-71; (b) to serve as a steering committee with respect to the assembly by the research staff of COU and OCUFA of additional relevant data; (c) to seek agreement on a recommendation to COU and OCUFA concerning salary objectives for 1970-71; (d) to serve as a liaison committee available to the director of the study of academic salaries to be conducted under the auspices of CUA, COU and OCUFA.

Membership: Committee inactive in 1971-72.

3. *COU/CUA Steering Committee on Educational Technology*

Task: To guide the Study of Educational Technology and to choose its director.

Membership: Two members from each of COU and CUA selected by their respective Executive Committees.

Co-Chairmen: Dr. J. B. Macdonald, Executive Director, COU, and Dr. D. T. Wright, Chairman, CUA.

BOARDS FOR COOPERATIVE PROJECTS

1. *Board for Computer Coordination*

Task: (a) To recommend policy concerning the work of the Office of Computer Coordination to the Council of Ontario Universities; (b) to recommend to COU budgets for the carrying out of the work of the Office of Computer Coordination; (c) To review and evaluate the progress of the work of the Director of the Office of Computer Coordination; (d) to consider and advise on proposals from the Director of the Office of Computer Coordination; (e) to consult regularly with the Committee on Computer Services on coordination and cooperation in the development of university computing services.

Membership: Chairman of Committee on Computer Services; a representative of computing science; a representative from the social sciences; a vice-president; a representative from the natural sciences; a member of COU; Executive Director of COU (observer).

Chairman: Dr. W. F. Forbes, Faculty of Mathematics, University of Waterloo.

2. *Board for Library Coordination*

Task: (a) To recommend policy concerning the work of the Office of Library Coordination to the Council of Ontario Universities; (b) to recommend to the Council of Ontario Universities budgets for the carrying out of the work of the Office of Library Coordination; (c) to review and evaluate the progress of the work of the Director of the Office of Library Coordination; (d) to consider and advise on proposals from the Director of the Office of Library Coordination; (e) to consult regularly with the Ontario Council of University Libraries (and from time to time with such other bodies as may appear to the Board to be helpful) on coordination and cooperation in the development of university library services.
Membership: Two (or three) chief librarians — members of OCUL, two (or three) deans of graduate studies from OCGS, four members of the professoriate of Ontario universities, due regard being paid to the composition of the Board in terms of the academic disciplines of its members and the sizes of the universities from which they come.
Chairman: Dean Paul Hagen, School of Graduate Studies, University of Ottawa.

3. *Board for Ontario Universities' Application Centre*

Task: (a) To recommend policy concerning the work of the Ontario Universities' Application Centre; (b) to recommend to COU budgets for the carrying out of the work of the Centre; (c) to review and evaluate the progress of the work of the Director of the Centre; (d) to consider and advise on proposals from the Director of the Centre; (e) to consult regularly with OUCA (and from time to time with such other bodies as may appear to the Board to be helpful) on the policy and operations of the Centre.
Membership: Nine members appointed by COU, plus the Executive Director of COU (ex officio). Five shall be chosen from the Ontario Universities' Council on Admissions. The Department of Colleges and Universities, the Department of Education, and the Ontario Secondary School Headmasters' Council shall be invited to nominate one member each.
Chairman: Mr. M. A. Bider, Registrar, York University.

AFFILIATES

1. *Ontario Universities' Council on Admissions*

Task: To deal with all admissions questions (both policy and procedures) of joint concern to the Ontario universities and specifically to make recommendations with respect to an Ontario Universities' Applications Centre.
Membership: At least one member from each university and not more than three from multi-faculty institutions, selection of the members to be the responsibility of the individual university.
Chairman: Dean A. D. Allen, Faculty of Arts and Science, University of Toronto.

2. *Ontario Council on Graduate Studies*

Task: To promote the advancement of graduate education and research in the provincially assisted universities in Ontario; to consider matters referred to it by the Council of Ontario Universities; to advise the Council on the planning and development of an orderly pattern of graduate education and research, having regard, among other things, to the need to avoid unnecessary duplication of programmes and facilities.
Membership: The provincially assisted universities of Ontario each represented by

the Dean of Graduate Studies or the Chairman of the Committee on Graduate Studies.
Chairman: Dean H. S. Armstrong, School of Graduate Studies, University of Guelph.

3. *Ontario Council of University Libraries*

Task: To provide a medium of communication among the directors of library facilities in Ontario universities; to advise the Board for Library Coordination on matters concerning coordination and cooperation in the development and use of university library services; to assist the Office of Library Coordination in the implementation of approved policies and programmes; to be responsible to COU and to respond to requests from COU for advice or assistance; to cooperate and maintain liaison with other agencies and councils as appropriate; to develop and oversee standards of general library service in the universities.
Membership: The chief librarian of each provincially assisted university which is a member of the Council of Ontario Universities and the Director of the Office of Library Coordination *ex officio* without vote.
Chairman: Mr. D. A. Redmond, Chief Librarian, Queen's University.

4. *Ontario Universities' Television Council*

Task: On request, to advise and assist universities, and to make recommendations to universities or to the Province, or both, on the development and use of television teaching in Ontario universities.
Membership: Two representatives, at least one of whom is a member of the academic staff, from each provincially assisted university in Ontario.
Chairman: Dean W. J. McCallion, School of Adult Education, McMaster University.

5. *Council of Ontario Faculties of Medicine*

Task: To provide an effective means of coordination of effort and a regular medium of communication between the faculties of medicine of universities of Ontario, having regard to the need to avoid unnecessary duplication or overlap of programmes between individual faculties and to provide special interuniversity projects which relate to medical education, research, and health services; to advise COU on matters which will influence medical education and research and to consider such matters as are referred to it by COU; to serve as liaison between the faculties of medicine and government agencies concerned with health and hospital services, professional colleges and associations, and any other organizations the activities of which influence medical education and research.
Membership: Each Ontario university with a faculty of medicine represented by the Dean of Medicine, with power to add the vice-presidents of health science and other associate members as occasion requires.
Chairman: Dean A. L. Chute, Faculty of Medicine, University of Toronto.

6. *Committee of Ontario Deans of Engineering*

Task: To provide a medium of communication among the engineering faculties of Ontario so that engineering education in the Province may evolve optimally; to advise the Council of Ontario Universities on any appropriate aspect of education.
Membership: Deans of engineering of faculties conferring the baccalaureate degree at institutions of post-secondary education in Ontario whose presidents are members of COU.
Chairman: Dean D. A. George, Faculty of Engineering, Carleton University.

7. *Ontario Association of Departments of Extension and Summer Schools*

Task: To promote closer relations among individuals and institutions interested in

credit and non-credit extension and to work for the development and improvement of continuing education at the university level.
Membership: Deans, directors and associate or assistant deans or directors of extension of degree-granting universities whose presidents are members of the Council of Universities of Ontario.
Chairman: Mr. H. G. Hooke, Director of Part-time Studies, Trent University.

8. *Ontario University Registrars' Association*

Task: (a) To provide an effective means to coordinate effort and a medium of communication among members of the Association; (b) to concern itself with items of academic administration, including admissions, registration, examinations, scheduling, transcripts, records, calendars, scholarships and awards, and secondary school liaison; (c) to encourage and conduct studies of matters related to (b); (d) to conduct seminars for the exchange of information and development of new procedures.
Membership: Administrative officers of Ontario universities responsible for the areas of (b) above.
President: Mr. H. W. Sterne, Assistant Registrar (Admissions), Queen's University.

9. *Ontario Committee of Deans and Directors of Library Schools*

Task: (a) To provide a medium of communication among the library schools of Ontario; (b) to promote the development and foster the improvement of librarianship in Ontario; and (c) to advise the Council of Ontario Universities on any appropriate aspect of library education.
Membership: The Dean or Director and one senior faculty member from each library school of a university whose president is a member of COU.
Chairman: Prof. R. Brian Land, Director, School of Library Science, University of Toronto.

10. *Committee of Deans of Ontario Faculties of Law*

Task: (a) To provide an effective means of communication and cooperation among the faculties of law of the Ontario universities on matters of common concern; (b) to advise the Council of Ontario Universities on matters of common concern in legal education and research, and to consider matters referred to it by COU; (c) to provide an effective means of cooperation among the faculties of law of Ontario universities for liaison with and advice to the Law Society of Upper Canada on matters of common concern in legal education and research.
Membership: The dean (or acting dean) of each faculty of law of the Ontario universities, and one other member of the teaching staff of each faculty.
Chairman: Dean D. A. Soberman, Faculty of Law, Queen's University.

11. *Committee of Finance Officers — Universities of Ontario*

Task: (a) To provide a medium for communication and cooperation among financial and business officers of the provincially assisted universities of Ontario so as to promote discussion among members, initiate and study matters of mutual interest, and provide collective advice to members on all matters pertaining to university finance and business operations and planning; (b) to provide advice, and to consider, investigate and report when requested, on financial and other related matters to the Council of Ontario Universities, its committees and other appropriate organizations.
Membership: The membership of the Committee shall comprise one senior financial officer from, and appointed by, each of the provincially assisted universities.
Chairman: Mr. J. McCarthy, Assistant Vice-Rector (Administration), University of Ottawa.

12. *Council of Deans of Arts and Science of the Ontario Universities*

Task: To promote the welfare of Ontario universities, particularly their faculties of Arts and Science, through study and discussion of matters of common interest.
Membership: The deans or equivalent officers of Ontario institutions having university status.
Chairman: Dean R. L. Watts, Faculty of Arts and Science, Queen's University.

13. *Ontario Council of Directors of University Schools of Physical Education*

Task: (a) To promote the advancement of professional preparation in the fields of physical, recreation and health education, and related programmes, in the universities of Ontario; (b) to consider matters referred to it by the Council of Ontario Universities; (c) to advise COU on any appropriate aspects of the fields of the Council's concern; (d) to provide for Ontario universities a medium of communication about and a forum for discussion of matters relating to these fields; (e) to cooperate with other agencies related to the fields of health, physical education and recreation to provide the best possible services to the community in the Province of Ontario.
Membership: Membership shall include a representative from each university which is represented on the Council of Ontario Universities and which grants a degree in physical, recreation or health education. The representative shall be the head of the department or school in which the degree programme is offered, or his delegate.
Chairman: Dr. Donald Macintosh, School of Physical and Health Education, Queen's University.

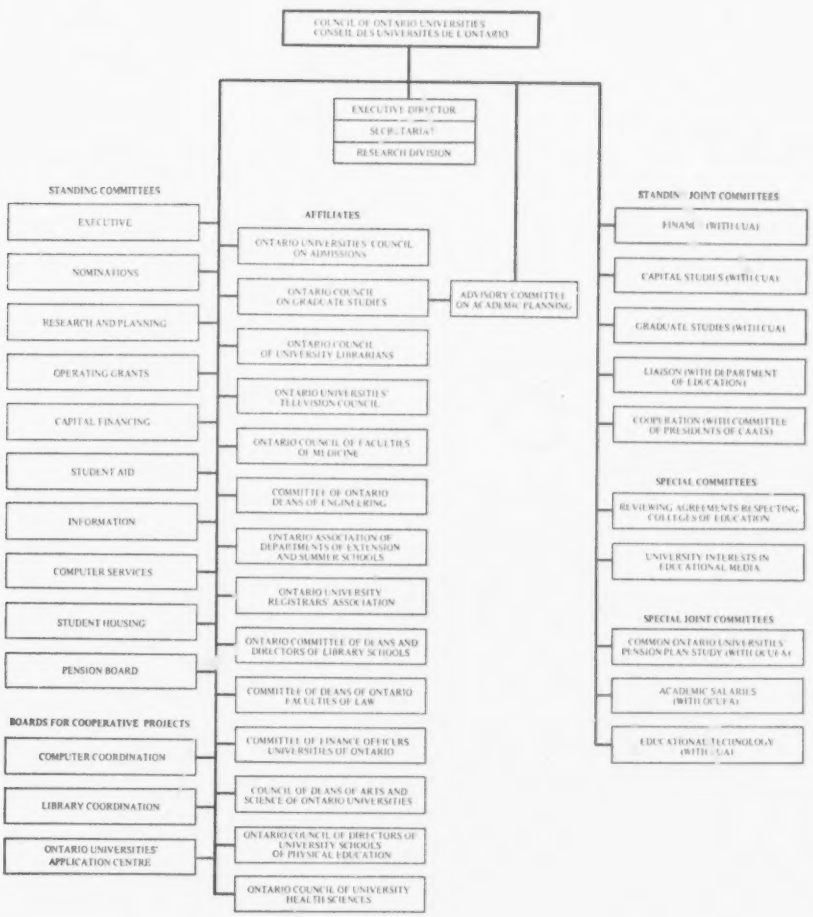
14. *Ontario Council of University Health Sciences*

Task: (a) To provide an effective means of coordination of effort through a regular medium of communication between health science faculties and schools of universities of Ontario; (b) to provide a forum for discussion of problems of mutual interest; (c) to advise COU on matters which will influence health science education and research; and to advise on membership of the Ontario Council of University Health Sciences; (d) to consider such matters as may be referred to it by COU; (e) to serve in a liaison capacity between the schools and faculties represented on it and other agencies offering educational programmes for allied health personnel.
Membership: (a) A health sciences faculty or school shall be defined initially as a faculty or school of Medicine, Dentistry, Pharmacy, Nursing, Hygiene, Optometry or Veterinary Medicine; (b) the senior executive officer of each such faculty or school or his appointed delegate shall be a member of the Ontario Council of University Health Sciences; (c) in addition, each university having a health sciences centre, the Vice-President, Health Sciences (Vice-Principal, Health Sciences) shall be a member of the Council, and where no such office exists, the president of that university may appoint one other member to the Council. For this purpose a health sciences centre shall be defined as a group of two or more health science faculties or schools within a university.
Chairman: Dr. J. D. Hamilton, Vice-President (Health Sciences), University of Toronto.

APPENDIX D

ORGANIZATION OF THE COUNCIL OF ONTARIO UNIVERSITIES

at November 1, 1971


COUNCIL OF ONTARIO UNIVERSITIES
CONSEIL DES UNIVERSITÉS DE L'ONTARIO
EXECUTIVE DIRECTOR
SECRETARIAT
RESEARCH DIVISION
STANDING COMMITTEES
EXECUTIVE
NOMINATIONS
RESEARCH AND PLANNING
OPERATING GRANTS
CAPITAL FINANCING
STUDENT AID
INFORMATION
COMPUTER SERVICES
STUDENT HOUSING
PENSION BOARD
BOARDS FOR COOPERATIVE PROJECTS
COMPUTER COORDINATION
LIBRARY COORDINATION
ONTARIO UNIVERSITIES' APPLICATION CENTRE
AFFILIATES
ONTARIO UNIVERSITIES' COUNCIL ON ADMISSIONS
ONTARIO COUNCIL ON GRADUATE STUDIES
ONTARIO COUNCIL OF UNIVERSITY LIBRARIANS
ONTARIO UNIVERSITIES' TELEVISION COUNCIL
ONTARIO COUNCIL OF FACULTIES OF MEDICINE
COMMITTEE OF ONTARIO DEANS OF ENGINEERING
ONTARIO ASSOCIATION OF DEPARTMENTS OF EXTENSION AND SUMMER SCHOOLS
ONTARIO UNIVERSITY REGISTRARS' ASSOCIATION
ONTARIO COMMITTEE OF DEANS AND DIRECTORS OF LIBRARY SCHOOLS
COMMITTEE OF DEANS OF ONTARIO FACULTIES OF LAW
COMMITTEE OF FINANCE OFFICERS UNIVERSITIES OF ONTARIO
COUNCIL OF DEANS OF ARTS AND SCIENCE OF ONTARIO UNIVERSITIES
ONTARIO COUNCIL OF DIRECTORS OF UNIVERSITY SCHOOLS OF PHYSICAL EDUCATION
ONTARIO COUNCIL OF UNIVERSITY HEALTH SCIENCES
ADVISORY COMMITTEE ON ACADEMIC PLANNING
STANDING JOINT COMMITTEES
FINANCE (WITH CUA)
CAPITAL STUDIES (WITH CUA)
GRADUATE STUDIES (WITH CUA)
LIAISON (WITH DEPARTMENT OF EDUCATION)
COOPERATION (WITH COMMITTEE OF PRESIDENTS OF CAATS)
SPECIAL COMMITTEES
REVIEWING AGREEMENTS RESPECTING COLLEGES OF EDUCATION
UNIVERSITY INTERESTS IN EDUCATIONAL MEDIA
SPECIAL JOINT COMMITTEES
COMMON ONTARIO UNIVERSITIES PENSION PLAN STUDY (WITH OCUFA)
ACADEMIC SALARIES (WITH OCUFA)
EDUCATIONAL TECHNOLOGY (WITH CUA)

APPENDIX E

COUNCIL OF ONTARIO UNIVERSITIES
STATEMENT OF RECEIPTS AND DISBURSEMENTS
FOR THE YEAR ENDED JUNE 30, 1971

Cash on hand — July 1, 1970			$287,518
Receipts			
Members' subscriptions		$559,098	
Interest income		9,704	
Province of Ontario			
Study of Educational Technology	$14,000		
Engineering Skill Substitution Study	19,000		
		33,000	
Other income (including net income from Ontario Universities' Television Council Film Purchase)		7,649	
			609,451
			896,969
Disbursements			
Capital expenditures		23,015	
Salaries and benefits		203,318	
Accommodation		36,815	
Telephone, telegraph, and postage		12,835	
Office supplies and printing		13,877	
Data processing expenses		34,824	
Purchase of books, reports, and periodicals		1,719	
Travel, meetings, and hospitality		13,972	
Publication of reports		13,630	
Professional fees		3,165	
Miscellaneous		2,927	
Projects and commissioned studies			
Inter-University Library Transit System		78,143	
Ontario Universities' Television Council		3,490	
Office of Library Coordination		43,852	
Office of Computer Coordination		146,963	
Engineering study		55,122	
Ontario Council of University Librarians		232	
Advisory Committee on Academic Planning		803	
Ontario Council on Graduate Studies		3,722	
Ontario Universities' Council on Admissions		8,708	
Engineering Skill Substitution Study		22,650	
Study of Educational Technology		16,280	
Common Ontario Universities' Pension System		5,046	
			745,108
Cash on hand — June 30, 1971			
Petty cash		100	
Bank accounts		151,761	
			$151,861

ONTARIO COUNCIL ON GRADUATE STUDIES
APPRAISAL COMMITTEE
STATEMENT OF RECEIPTS AND DISBURSEMENTS
FOR THE YEAR ENDED JUNE 30, 1971

Cash on hand — July 1, 1970		$16,558
Fees received		62,000
		78,558
Expenses		
Consultants		
Fees	$31,900	
Travel	13,981	
Hotel	2,187	
Meals	776	
Telephone and telegraph	43	
Exchange	419	
Miscellaneous	510	
	49,816	
Committee		
Travel	947	
Hotel	62	
Meals	820	
Telephone and telegraph	578	
Salaries	2,965	
Supplies	283	
Miscellaneous	306	
	5,961	
		55,777
Cash on hand — June 30, 1971		$22,781

APPENDIX F

PUBLICATIONS AND REPORTS OF THE COUNCIL OF ONTARIO UNIVERSITIES AND ITS AFFILIATES

Number	*Title*	*Price*	*Available from*
62–1	Post-secondary Education in Ontario, 1962-70. (1962) 44 pp.	$1.00	U of T Bookroom
63–1	The Structure of Post-secondary Education in Ontario. (1963) 30 pp.	$1.50	U of T Bookroom
65–1	The City College. (1965) 15 pp.	$1.00	U of T Bookroom
65–2	University Television. (1965) 28 pp.	$1 00	U of T Bookroom
66–1	From the Sixties to the Seventies: An Appraisal of Higher Education in Ontario. (1966) 101 pp.	$2.00	U of T Bookroom
66–2	The Health Sciences in Ontario Universities: Recent Experience and Prospects for the Next Decade. (1966) 26 pp.	$1.00	U of T Bookroom
66–3	Report of the Commission to Study the Development of Graduate Programmes in Ontario Universities submitted to the Committee on University Affairs and the Committee of Presidents of Provincially Assisted Universities. (Published jointly with CUA.) (1966) 110 pp.		Out of print
67–1	System Emerging: First Annual Review. (1967) 59 pp.	$1.00	U of T Bookroom
67–2	Brief to the Committee on University Affairs. (1967) 38 pp.	Gratis	COU
67–3	A Formula for Operating Grants to Emergent Universities. (1967) 40 pp.	Gratis	COU
68–1	Collective Autonomy: Second Annual Review. (1968) 65 pp.	$1.00	U of T Bookroom
68–2	Student Participation in University Government: A student paper prepared for the Committee of Presidents by its Subcommittee on Research and Planning. (1968) 21 pp.		Out of print
68–3	Ontario Council of University Librarians: Inter-University Transit System Anniversary Report 1967-68. (1968) 20 pp.	Gratis	Libraries' Transit System Office York University
68–4	Brief to the Committee on University Affairs. (1968) 40 pp.	Gratis	COU

U of T Bookroom — University of Toronto Bookroom
COU — Council of Ontario Universities
DCU — Department of Colleges and Universities

Number	*Title*	*Price*	*Available from*
68–5	Notes on the Special Study on Operating Support for the Emerging Universities in Ontario for Fiscal Year 1968/69, prepared for the Ontario Committee on University Affairs, July 1968. (1968) 27 pp.	Gratis	COU
69–1	Campus and Forum: Third Annual Review. (1969) 73 pp.	$1.00	U of T Bookroom
69–2	Brief to the Committee on University Affairs. (1969) 54 pp.	Gratis	COU
69–3	Proposal for a Central Data Bank on Students and Resources of Ontario Universities. (1969) 116 pp.		Out of print
69–4	Survey of Citizenship of Graduate Students enrolled in Master's and Doctoral Degree Programs at Ontario Universities in 1969-70 (with Comparative Statistics for 1968-69) 24 pp.	Gratis	COU
69–5	Final Report and Recommendations on Regional Computing Centre Development. (1969) 8 pp.	Gratis	COU
69–6	Brief of the Structure and Operation of the Operating Grants Formula for the Provincially Assisted Universities of Ontario 1967-68 through 1969-70. (1969) 22 pp.	Gratis	COU
70–1	Undergraduate Engineering Enrolment Projections for Ontario, 1970-80. (1970) 72 pp.	$1.00	U of T Bookroom
70–2	An Analysis of Projections of the Demand for Engineers in Canada and Ontario, and an Inquiry into substitution between Engineers and Technologists. (1970) 64 pp.	$1.00	U of T Bookroom
70–3	A Method for Developing Unit Costs in Educational Programs. (1970) 65 pp.	$1.00	U of T Bookroom
70–4	Ring of Iron: A Study of Engineering Education in Ontario. (1970) 154 pp.	$2.00	U of T Bookroom
70–5	Variations on a Theme: Fourth Annual Review. (1970) 77 pp.	$1.00	U of T Bookroom
70–6	Ontario Council on Graduate Studies: The First Three Years of Appraisal of Graduate Programmes. (1970) 17 pp.	.50	U of T Bookroom
70–7	Brief to the Committee on University Affairs. (1970) 47 pp.	Gratis	COU
70–8	Schedule, Costs and Technical Aspects of Development of the Data Bank: Supplementary Report #1. (1970) 64 pp.		Out of print
70–9	Inter-Provincial Comparisons of Cost and Quality of Higher Education in Canada. (1970) 54 pp.	Gratis	COU
70–10	A Technical Analysis of Ontario Universities' Requirements for Library Facilities, 1970-76. (1970) 75 pp.	Gratis	COU
70–11	Aims and Objectives of Emerging Universities. (1970) 14 pp.	Gratis	COU

Number	*Title*	*Price*	*Available from*
70–12	Guidelines for Facilities Planning and a Capital Formula. (1970) 60 pp.		Out of print
70–14	Citizenship of Academic Staff within Discipline Groups by University 1969-70. (1970) 5 pp.	Gratis	COU
70–15	Survey of Employment of Ontario PhD Graduates, 1964-69. (1970) 30 pp.	Gratis	COU
70–16	Report to the Ontario Council on Graduate Studies of the Committee on Student Financial Support. (1970) 59 pp.	Gratis	COU
70–17	Report of the Task Force on Computer Charging. (1970) 58 pp.	Gratis	COU
70–18	Specialized Manpower Production and Research Development in Ontario Faculties of Medicine, 1969-75. (1970) 92 pp.	Gratis	COU
70–19	Television and Technology in University Teaching. (Published jointly with the Committee on University Affairs) (1971) 84 pp.	Gratis	COU
70–20	Proposal for the Development of a Computer/ Communications Network. (1970) 45 pp.		Out of print
70–21	Report on Agreements between Universities and the Department of Education concerning Colleges of Education. (1970) 7 pp.	Gratis	COU
70–22	Analysis of Section Sizes, Fall 1969. (1970) 50 pp.	Gratis	COU
71–1	Methodology of Section Size Analysis (1971). (1971) 18 pp.	Gratis	COU
71–2	Supplement #1 to the Survey of Employment of Ontario PhD Graduates, 1964-69. (1971) 7 pp.	Gratis	COU
71–3	Towards Two Thousand (typescript version). (Brief to Commission on Post-Secondary Education) (1971) 231 pp.		Out of print
71–4	Report by the Interest Group on System Performance Measurement and Evaluation. (1971) 45 pp.		Out of print
71–5	Report of the Cooperative Library Interest Group. (1971) 120 pp.		Out of print
71–6	A Joint Proposal by the O.H.S.C. and the C.P.U.O. for the Allocation of O.H.S.C. Funds for Geographic Staff. (1971) 17 pp.	Gratis	COU
71–7	Financing University Programs in Education. (Published jointly with the Committee on University Affairs) (1971) 76 pp.	Gratis	COU
71–8	Ontario Universities' Application Centre: A Study of the Needs and Design of a Centre for Applications for Admission to the Universities of Ontario. (1971) 49 pp.	Gratis	COU
71–9C	Towards 2000. (Published by McClelland and Stewart) (1971) 176 pp. 0-7710-0149-5 (cloth)	$6.95	McClelland and Stewart
71–9P	Towards 2000. (Published by McClelland and Stewart) (1971) 176 pp. 0-7710-0150-9 (paper)	$2.95	McClelland and Stewart
71–10	Accessibility and Student Aid. (1971) 150 pp.	$2.50	U of T Bookroom

Number	*Title*	*Price*	*Available from*
71–11	Appendix A to Accessibility and Student Aid. (1971) 165 pp.	Gratis	COU
71–12	A Comparative Analysis of University Calendar Systems. Brief to the Ontario Committee on University Affairs. (1971) 49 pp.	Gratis	COU
71–13	Statement by the Council of Ontario Universities and Responses by Committee of Ontario Deans of Engineering, Ontario Council on Graduate Studies, Association of Professional Engineers of the Province of Ontario to *Ring of Iron: A Study of Engineering Education in Ontario.*	$1.00 (Single copies free)	COU
71–14	Graduate Enrolments in Relation to Requirements for Academic Staff in Ontario Universities. Brief to the Ontario Committee on University Affairs. (1971) 85 pp.	Gratis	COU
71–15	Participatory Planning: Fifth Annual Review, 1970-71. (1971) 96 pp.	$1.00	U of T Bookroom

APPENDIX G

ONTARIO COUNCIL ON GRADUATE STUDIES
BY-LAW NO. 3

A By-law to establish a Committee on the academic planning of Graduate Studies.

1. The Ontario Council on Graduate Studies, recognizing the importance of providing for the continued and orderly development of graduate studies in the Ontario universities, establishes a Standing Committee to be known as the Advisory Committee on Academic Planning (abbreviation — ACAP).

Interpretation

2. In this By-law,
   (a) "Committee" without further specification, means the Advisory Committee on Academic Planning;
   (b) "Council" or OCGS means the Ontario Council on Graduate Studies;
   (c) "COU" means the Council of Ontario Universities;
   (d) "university" means a provincially assisted university in Ontario;
   (e) "discipline" means any branch or combination of branches of learning so designated;
   (f) "discipline group" means a body designated as such by the Council of Ontario Universities, and normally consisting, for any one discipline, of one representative from each of the interested universities;
   (g) "planning assessment" means a formal review of current and projected graduate programs within a discipline or a group of disciplines;
   (h) "program" signifies all aspects of a particular graduate undertaking;
   (i) "rationalization" means the arranging of graduate programs in order to avoid undesirable duplication, eliminate waste, and enhance and sustain quality.

Membership

3. (a) The Committee shall consist of at least seven members of the professoriate in Ontario universities, some of whom shall be members of the Council.
   (b) The members of the Committee shall serve for such periods of time as the Council may determine, and they shall be selected in such manner as may provide for reasonable balance both of academic disciplines and of universities.
   (c) The members of the Committee shall be appointed as individuals.

Chairman

4. The Chairman of the Committee shall be named by the Council, and he shall have one vote.

Quorum

5. A majority of all members of the Committee shall constitute a quorum.

Functions

6. The functions of the committee shall be
   (a) To advise OCGS on steps to be taken to implement effective provincial planning of graduate development;
   (b) To promote the rationalization of graduate studies within the universities, in cooperation with the discipline groups;

(c) To recommend, through OCGS, to COU the carrying out of planning assessments of disciplines or groups of disciplines and to recommend suitable arrangements and procedures for each assessment;
(d) To supervise the conduct of each planning assessment approved by COU;
(e) To respond to requests by COU to have a discipline assessment conducted by proposing suitable arrangements;
(f) To submit to COU the reports of the assessments together with any recommendations which the committee wishes to make. A copy of the report shall be sent to Council.

Jurisdiction

7. In order that the Committee may discharge the functions described in Section 6 above, it shall be authorized
   (a) to request a university to provide such information pertaining to graduate studies as may enable the Committee to discharge its functions;
   (b) to request a discipline group to provide such information as may enable the Committee to discharge its functions;
   (c) to receive reports from the universities and from the discipline groups and to comment and communicate with the universities and the discipline groups concerning such reports;
   (d) to convene a meeting of any discipline group for the purpose of discussing the development to date, and proposals for the future development of graduate studies in the discipline concerned;
   (e) to send one or more representatives to a meeting of a discipline group at the invitation of the discipline group;
   (f) to make such suggestions to a discipline group as may be deemed appropriate to the functions of the Committee;
   (g) to supervise the conduct of planning assessments, and to report thereon to COU;
   (h) generally to report and to make recommendations to the Council;
   (i) to seek and receive advice from appropriate experts;
   (j) to employ consultants in connection with planning assessments.

Procedures

8. The procedure to be followed by the Committee shall be as approved by the Council, and in the case of Discipline Assessments the procedure shall be as approved by COU.
9. The Committee's function is solely advisory.

Effective Date

10. This By-law shall take effect January 1971.

ADVISORY COMMITTEE ON ACADEMIC PLANNING

Membership at November 1, 1971

Terms Expiring June 30, 1972

Dean H. S. Armstrong (Guelph), Chairman (Land Resource Science)
Professor R. A. Spencer (Toronto) (History)
Professor L. A. K. Watt (Waterloo) (Electrical Engineering)

Terms Expiring June 30, 1973

Dean R. L. McIntosh (Queen's) (Chemistry)
Professor K. H. Burley (Western) (Economics)
Professor E. Wright (Laurentian) (English)

Terms Expiring June 30, 1974

Dean A. D'Iorio (Ottawa) (Biochemistry)
Professor R. F. White (Trent) (Sociology)
Professor I. C. Jarvie (York) (Philosophy)

Professor M. A. Preston — Executive Vice-Chairman

APPENDIX H

SUMMARY OF COU CONFERENCE ON ACADEMIC STAFF SUPPLY AND DEMAND

During the summer of 1971, COU convened a two-day meeting to discuss the problems of matching potential supplies of personnel qualified for academic positions with the demand for such highly qualified personnel over the next several years. Guests were invited from various interested provincial and federal agencies and the programme featured presentations on such topics as current and projected employment of PhDs, demands for scientific manpower over the next 10-15 years, and analytic models for forecasting, analyzing and presenting various alternative patterns of supply and demand according to postulated changes in important parameters.

Allan M. Cartter, Chancellor of New York University, was a special invited guest. Dr. Cartter presented a generally pessimistic picture of employment prospects in universities for PhD holders during the next 15 years. He has looked at various projections of college age populations and participation rates, the anticipated outputs of PhD holders from U.S. universities and using present quality standards (proportion of PhDs) and even improving them as a variant in the analysis, he concluded that there could be as many as 100-200,000 PhD holders surplus to university staffing requirements during the next decade. Other U.S. studies have tended to confirm his analyses with various interpretations placed upon what effects such a surplus will have on the job prospects and starting salaries of these people, and what it will mean in the displacement of less-educated people from their normal positions in the labour force. Canadian speakers at the conference were less pessimistic about Canadian surpluses. The same problem is recognized but it is not of the same magnitude. Dr. F. Kelly and Dr. A. Boyd, science advisors to the Science Council of Canada, discussed their studies of prospects for employment of scientists and engineers in Canada. Dr. M. A. Preston, Executive Vice-Chairman of the Advisory Committee on Academic Planning, presented information on the employment of students awarded PhDs in 1970-71. Dr. Max von Zur-Muehlen, Economic Council of Canada, and Mr. B. L. Hansen of the Council of Ontario Universities discussed the use of analytic models for demand and supply studies of Canadian PhDs. Mr. Peter Ross, Canada Department of Manpower and Immigration, discussed his studies on the short-run PhD outlook.

After these presentations there was considerable discussion of what further research and refinements to present research were necessary. The possibility of developing manpower policies which would restrain enrolments was given a thorough airing. The main conclusions arising out of the conference are summarized below.

Analytic models for forecasting supply and demand

Planners need to have more disaggregation of university disciplines to be able to use models for effective planning. Present estimates of surpluses and deficits at aggregated levels such as Humanities, Social Sciences, Biological Sciences and Physical Sciences are valuable for general conclusions on present status and for avoiding excessive restrictive measures born out of panic, but they are of limited usefulness for planning additions and replacements of highly qualified specialized manpower.

There is a need for better information on the interprovincial flows of persons taking academic positions in the provincial universities. Also, changing patterns of emigration and immigration between Canada, the U.S. and Great Britain particularly should be accounted for in the models.

Values used for certain parameters in the models need to be examined very closely for their reasonableness as representative values which may be expected to apply over the projection period (e.g. the difference between attrition rates of 2% and 4% does not appear large but it is in numbers of staff when the present and projected complement of staff numbers is in the thousands— 2% of 10,000 = 200. Also, regarding this same parameter of attrition rate, it would be important to input the different attrition rates which would be representative of different discipline groups having different age averages). Other important parameters for tests of reasonableness are incremental student/staff ratios, percentages of new staff with PhDs, lagged baccalaureate to PhD ratios, and lead times for production of PhDs from the baccalaureate.

As a follow-up to this conference, technical experts concerned with modeling and analysis should convene at an early time (immediately after the enrolment information for 1971-72 is available) to resolve any serious disagreements on parameter values and to provide policy makers with their forecasts of supply and demand. Such forecasts are going to have to reach much farther into the the future than 1975-76; output p[illegible] to 1976 is largely determined by graduate enrolment policy decisions made several years ago (the average elapsed time to completion of a PhD from the baccalaureate being 7-8 years). Their analyses should include the most appropriate disaggregation of disciplines for meaningful comparisons of supply and demand. The survey of graduate students to be conducted during the fall of 1971 by the Canada Council, the Medical Research Council, and the National Research Council, should provide valuable input to the formation of the proper taxonomical structure.

Some means should be found for getting recurring information on employment related to degree programme similar to that provided in the Manpower and Immigration survey of 1967. The data base could be improved also by providing information regularly on the number of new students entering graduate degree programmes.

Discussion related to graduate enrolment policies

There was a great deal of discussion about whether specific measures to restrict enrolment in specific programmes should be recommended. The point was emphasized that there are indications now that the market is operating. There are likely to be marked reductions in the forecasted intake of PhD seekers in the humanities and social sciences (aided, no doubt, by the reductions in provincial student aid support to these disciplines). New enrolments in Chemistry and Physics are expected to be sharply reduced when the enrolment data for 1971-72 are available. An example on the positive side was cited of 120 applications for geology scholarships this year in contrast to an historical average of 60. In response to a question about whether or not there is a case for dampening actions on specific programmes there was a consensus that (1) the market signals are beginning to have effect, (2) it is important to publicize and distribute information about employment prospects and requirements as widely as possible, (3) effective control cannot rest with any one authority in an essentially open system—if controls are to be introduced the instruments to be used (student aid reductions, outright restrictions on enrolment, closing programmes and employment to non-Canadians, etc.) and the way they are used are very important and (4) specific restraint measures should not be recommended at least until the enrolment figures for 1971-72 are available. There was concern expressed that we would overreact and intensify the imbalances that characterize the supply and demand of highly qualified manpower.

The majority opinion favoured a policy proposed in the Science Council/Canada Council special study *The Role of the Federal Government in Support of Research in Canadian Universities*, that

> The country as a whole and the provinces must be concerned about manpower requirements. This concern can be expressed in the first instance through careful survey and forecasting of manpower needs on a continuing basis. Such forecasts should be given wide circulation. It is reasonable to expect that universities will respond by creating additional opportunities for study in the areas of shortage. In addition, the universities through their counselling services have a duty to advise students about the opportunities in various fields from the standpoint not only of intellectual challenge but also of vocational prospects and social utility. The reaction of prospective students to such forecasts is likely to provide an effective control. We believe the market-place, if its trends are made explicit, offers an adequate governor to prevent serious surfeit and to encourage movement of students toward fields of opportunity.[1]

There was a dissenting opinion, however, that though we should not overreact as far as controlling total supply is concerned, we should attempt to identify specific areas of extreme surplus or deficit and possibly provide some measures of incentives or control to correct them. It was also pointed out that while the distribution of information on job prospects and openings is improving, it still leaves much to be desired. For example, a check survey had revealed that

[1]Macdonald, J. B., *et al*, (Ottawa: Queen's Printer, 1969), p. 117.